Appropriations for FY2005: Energy and Water Development

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Summary

The Energy and Water Development appropriations bill includes funding for civil works projects of the Army Corps of Engineers (Corps), the Department of the Interior's Bureau of Reclamation (BOR), most of the Department of Energy (DOE), and a number of independent agencies. The Bush Administration requested $27.94 billion for these programs for FY2005, compared with $27.26 billion appropriated for FY2004 (P.L. 108-137, and rescissions included in P.L. 108-199). On June 16 the House Appropriations Committee reported out its bill (H.R. 4614) with $27.99 billion, and the bill passed the House on June 25. The Senate did not report out a separate Energy and Water Appropriations bill, and funding for these programs of $28.49 billion was included as Division C of the omnibus Consolidated Appropriations Act (H.R. 4818, P.L. 108-447).

Key issues involving these programs included:

- funding and progress of major water/ecosystem restoration initiatives such as Florida Everglades and California "Bay-Delta" (CALFED);
- funding for the proposed national nuclear waste repository at Yucca Mountain, Nevada;
- funding for developing a new nuclear warhead, the Robust Nuclear Earth Penetrator and for a "Modern Pit Facility" to build nuclear weapons components; and
- plans to reduce the time necessary to prepare the Nevada Test Site to resume nuclear weapons testing.

Funding for the Yucca Mountain project was a major issue that prevented passage of a stand-alone bill, and the possibility of a year-long continuing resolution for Energy and Water programs was widely discussed. However, appropriators agreed in the omnibus bill to fund the project at the same level as in FY2004. Part of the funding for Yucca Mountain came from the controversial Nuclear Earth Penetrator and pit facility and the upgrading of the Nevada Test Site, which were cut from the budget.

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Most Recent Developments

The Bush Administration's FY2005 budget request, released February 2, 2004, budgeted Energy and Water Development Programs at $27.94 billion, compared to $27.26 billion appropriated for the same programs for FY2004. On June 16 the House Appropriations Committee reported its bill with $27.99 billion, and the House passed it June 25. The House and Senate both approved a conference report (H.Rept. 108-792) on H.R. 4818 on November 20, containing FY2005 appropriations for previously unpassed bills, including Energy and Water Development. H.R. 4818 was forwarded to the President December 6 and signed December 8 (P.L. 108-447).

Status

Table 1. Status of Energy and Water Development Appropriations, FY2005

Subcommittee Markup		House Report	House Passage	Senate Report	Senate Passage	Conf. Report	Conference Report Approval (H.R. 4818)		Public Law
House	Senate						House	Senate	
6/9/04	—	108-554	6/25/04	—	—	108-792	11/20/04*	11/20/04[a]	P.L. 108-447

a. Held at desk in Senate until December 6, when the House approved H.Con.Res. 528.

Overview

The Energy and Water Development bill includes funding for civil works projects of the U.S. Army Corps of Engineers (Corps), the Department of the Interior's Bureau of Reclamation (BOR), most of the Department of Energy (DOE), and a number of independent agencies, including the Nuclear Regulatory Commission (NRC) and the Appalachian Regional Commission (ARC). The Bush Administration's request was $27.938 billion for these programs for FY2005, compared with $27.253 billion appropriated for FY2004. The House bill (H.R. 4614) reported by the Appropriations Committee, and passed by the House June 25, contained funding at $27.988 billion. The omnibus Consolidated Appropriations bill (H.R. 4818, P.L. 108-447) appropriates $28.488 billion, less an across-the-board rescission of 0.80% (Division J, section 122, as amended by H.Con.Res 528). Throughout this report, figures cited for funding in the omnibus bill do not reflect this 0.80% reduction.

Table 2 includes budget totals for energy and water development appropriations enacted for FY1998 to FY2004 and the Administration's request for FY2005.

Table 2. Energy and Water Development Appropriations, FY1998 to FY2005

(budget authority in billions of current dollars)[a]

FY98	FY99	FY00	FY01	FY02	FY03	FY04	FY05 (Req.)
21.2	21.2	21.2	23.9	25.2	26.1	26.7	27.9

a. These figures represent current dollars, exclude permanent budget authorities, and reflect rescissions.

Table 3 lists totals for each of the four titles. The table also lists several "scorekeeping" adjustments of accounts within Titles II and III that affect the total amount appropriated in the bill but are not included in the totals of the individual titles.

Table 3. Energy and Water Development Appropriations Summary of Funding by Title

($ billions)

Title	FY2004	FY2005 Request	House H.R. 4614	P.L. 108-447[a]
Title I: Corps of Engineers	4.580	4.120	4.832	4.705
Title II: CUP & BOR	0.981	0.970	1.021	1.020
Title III: Department of Energy	21.967	23.148	22.478	23.003
Title IV: Independent Agencies	0.228	0.232	0.193	0.292
Subtotal	**27.756**	**28.470**	**28.525**	**29.020**
Scorekeeping Adjustments				
Central Valley (Title II)	-0.031	-0.046	-0.046	-0.046
Uranium Fund (Title III)	-0.452	-0.463	-0.463	-0.463
WAPA (Title III)	-0.022	-0.023	-0.023	-0.023
Other (Title II)	-0.002	—	—	—
Total	**27.253**	**27.938**	**27.993**	**28.488**

Source: H.Rept. 108-792.

a. Does not include the modified rescission amount of .80% in H.Con.Res. 528.

For the Corps in FY2005, the Administration requested $4.12 billion, a decrease of $460 million from the enacted appropriation for FY2004. The Administration's request focused funding on construction projects that could be completed in FY2005 and eight projects considered priorities by the Administration, including the Florida Everglades. The omnibus H.R. 4818 (P.L. 108-447) increased the funding to $4.71 billion before the rescission.

The Administration asked for $970 million for FY2005 for the Department of the Interior programs included in the Energy and Water Development bill—the Bureau of Reclamation and the Central Utah Project. This would be a decrease of $11 million from the FY2004 funding level. The House bill (H.R. 4614) would have appropriated $1.021 billion. The omnibus bill appropriated $1.020 billion, less the rescission.

The FY2005 request for DOE programs in the bill was $23.148 billion, about $1.18 billion more than the previous year. The major activities in the DOE budget are energy research and development, general science, environmental cleanup, and nuclear weapons programs. (Funding of DOE's programs for fossil fuels, energy efficiency, and energy statistics is included in the Interior and Related Agencies appropriations bill. The FY2005 net request for these programs was $1.7 billion.) The House bill (H.R. 4614) would have appropriated $22.478 billion. The omnibus bill appropriated $23.003 billion, less the rescission.

The FY2005 request for funding the independent agencies in Title IV of the bill was $232 million, compared with $228 million in FY2004. The House bill (H.R. 4614) would have appropriated $193 million for these programs. The omnibus bill figure is $292 million.

Tables 4 through 11 provide budget details for Title I (Corps of Engineers), Title II (Department of the Interior), Title III (Department of Energy), and Title IV (independent agencies) for FY2004-FY2005.

Title I: Corps of Engineers

The President's request for FY2005 for the civil works program of the U.S. Army Corps of Engineers was $4.12 billion, a decrease of $460 million from the enacted appropriation for FY2004.

Table 4. Energy and Water Development Appropriations
Title I: Corps of Engineers

($ millions)

Program	FY2004[a]	FY2005 Request	House H.R. 4614	P.L. 108-447[f]
Investigations and Planning	116.3	90.5	149.0	144.5
Construction	1,748.1b	1,327.5[c]	1,876.7	1,796.1
Flood Control, Mississippi River	322.3	265.0[c]	325.0	324.5
Operation and Maintenance	1,956.3	1,931.0	1,982.0	1,959.1
Regulatory	139.2	150.0	140.0	145.0
General Expenses	159.1	167.0	167.0	167.0
FUSRAP[d]	139.2	140.0	190.0	165.0
Flood Control and Coastal Emergencies	—[e]	49.0[c]	—	—
Office of the Asst. Secretary or the Army	0.0	0.0	2.6	4.0
Total	**4,580.4**	**4,120.0**	**4,832.3**	**4,705.2**

Source: Administration budget request for FY2005, H.Rept. 108-554, and H.Rept. 108-792. Budget justifications for FY2005 from the Corps of Engineers.

Notes:

a. Includes an across-the-board rescission of .59% included in the FY2004 Consolidated Appropriations Act, P.L. 108-199, enacted on January 23, 2004.

b. This figure reflects amounts provided by the House Appropriations Committee; the Committee showed $35.9 million added by P.L. 108-199. Other sources indicate that the supplemental appropriation was less and that the total construction appropriation was $1731.3.

c. This amount includes the Administration's proposed cancellation of $100 million ($94 million in construction, $5 million in Mississippi River flood control, $1 million in flood control and coastal emergencies) in unobligated FY2004 balances for work on 41 projects that are "inconsistent with current policy."

d. "Formerly Utilized Sites Remedial Action Program."

e. The conference committee for FY2004 appropriations removed all funding for the Flood Control and Coastal Emergencies account because the account was replenished with $60 million through the Legislative Branch Appropriations Act for FY2004, P.L. 108-83.

f. Does not include the modified rescission amount of .80% in H.Con.Res. 528, which would produce a total of $4,667.9 million.

The President's FY2005 budget request was similar in many ways to the President's FY2004 request. Again for FY2005, the President's request funded construction projects that could be

completed in FY2005 and projects considered by the Administration to be priorities. The eight priority projects included the New York and New Jersey Harbor Deepening project, restoration projects in the Florida Everglades and the side channels of the Upper Mississippi River system, and projects to meet environmental requirements in the Columbia River Basin and the Missouri River basin. The President's budget also funded three new projects that were determined to have high economic and environmental return. Outside of these three projects, there were no other new construction starts, because of the Administration's concern with the funding needed to complete projects budgeted for construction. In keeping with the Administration's approach to reducing the agency's construction backlog, the President's budget limited funding for planning to five new projects. The request also focused the operation and maintenance funds for the inland waterways and harbors on projects supporting a high volume of traffic.

The Corps announced in its budget briefing on February 2, 2004, that it did not budget for the continued renourishment of shoreline storm damage reduction projects, indicating that it considered these costs as maintenance expenses to be borne by the non-federal project sponsors. This represented a change from the Corps' past involvement with renourishment, often at a 50% federal cost share. The budget also generally deemphasized shallow draft harbors and waterways with low commercial use.

The President requested no funds for studies and "environmental infrastructure" projects in the following non-traditional mission areas: wastewater treatment, irrigation water supply, and municipal and industrial water supply treatment and distribution. By not seeking funding for these activities, the Administration reinforced its interest in focusing federal funding on navigation, flood control, storm damage reduction, and ecosystem restoration projects.

H.R. 4818 (P.L. 108-447) increases the Corps' appropriations over FY2004 and above the President's FY2005 request; the exact increase depends on the size of the rescission. H.R. 4818 (P.L. 108-447) funds some environmental infrastructure projects and funds some beach renourishment activities. Furthermore, the bill states that the Corps shall not implement any changes to existing shoreline protection policies that have not been specifically authorized by Congress. The bill does not fund the new study or construction starts requested by the President. It does fund some controversial construction projects, including the Dallas Floodway Extension and Yazoo Basin projects. According to the conference report, Congress provided more funds for the popular Continuing Authorities Programs than requested by the Administration; the conference report also continued the recent trend of identifying specific priority projects for funding under these programs.

H.R. 4818 (P.L. 108-447) contains some authorization language. Although the bill does not contain authorization of the Upper Mississippi River-Illinois Waterway navigation and ecosystem restoration project, it provides $13.5 million in funding to proceed with the planning of the controversial navigation project. The bill provides $17.5 million, which is less than the $28 million requested by the Administration, for the Upper Mississippi River System's Environmental Management Program, which complements the proposed ecosystem restoration project.

Key Policy Issues—Corps of Engineers

Funding Level

Funding for the Corps' civil works program often has been a contentious issue between the Administration and Congress, with final appropriations typically providing more funding than requested, regardless of which political party controls the White House and Congress. The FY2003 and FY2004 appropriations bills added funds above the Administration's request; they

were, respectively, $466 million (11%) and $370 million (9%) above the requested amounts. The FY2005 budget request proposed a 10% cut from the enacted FY2004 appropriations; H.R. 4818 (P.L. 108-447) appropriates 14% more than the request.

The House Transportation and Infrastructure Subcommittee on Water Resources and Environment held a hearing on the Corps' FY2005 budget on February 26, 2004. On March 10, 2004, the House Appropriations Subcommittee on Energy and Water Development held its hearing. The Senate Appropriations Subcommittee on Energy and Water held a hearing on April 20, 2004.At these hearings, some Members of Congress raised concerns that the Administration's request represented a reduction in each of the major Corps accounts. At these hearings, Assistant Secretary of the Army Woodley mentioned the Corps' use of a performance-based approach in developing the budget request (i.e., providing funding to the projects that it identifies as having the highest economic and environmental returns). Some Members expressed particular concern about the application of performance-based budgeting and OMB's role in delayed use of FY2004 funds for congressionally added projects.

The Administration's FY2005 funding levels for navigation operation and maintenance and beach renourishment policy changes have drawn criticism from some stakeholders and support from others. House and Senate Waterways Caucuses announced their formation at a kick-off meeting on May 21, 2004. Caucus members spoke on the importance of the nation's waterways to trade, tourism, and recreation; they also asserted a need for increased funding for the civil works program.

H.R. 4818 (P.L. 108-447) maintained the FY2004 spending level for O&M. The bill did not provide the $35 million reserve requested for emergency repairs, which had received $15 million in FY2004. O&M funding for some navigation channels was restored by H.R. 4818 (P.L. 108-447); notably, the bill increased O&M funds above the President's request for many segments of the Atlantic Intracoastal Waterway, with FY2005 appropriations for the waterway reaching a level about 85% of previous years' appropriations. The bill also increased the O&M funding for the controversial waterway of the Apalachicola, Chattahoochee, and Flint Rivers from $0.1 million to $6 million.

Savings and Slippage and Reprogramming

Corps appropriations include a reduction for *Saving and Slippage* (S&S) to account for the *slip* of spending on projects due to delays caused by weather, non-federal sponsor financing, or a decision not to proceed—or to account for *savings* from a project costing less than estimated. The Administration in its budget estimate proposes an S&S rate for various Corps accounts; Congress maintains or modifies these rates during the appropriations process. The enacted S&S rates are normally applied across the board to all projects in an account, except for those activities specifically set forth in act language. S&S rates that exceed the actual saving and slippage experienced could contribute to appropriations constraints on the progress of projects. Over the course of the fiscal year, the Corps reprograms funds within an account from the projects that are not proceeding as planned to those that are moving forward. There is no statutory language permitting or prohibiting reprogramming of funds; however, Congress provided specific guidance in the past with regard to reprogramming of the construction account in report language. The conference report for H.R. 4818 (P.L. 108-447) (H.Rept. 108-792) lays out for the Corps general criteria for reprogramming. The conference report shows savings and slippage rates of 20% for the general investigations account consistent with the Administration's request for a 20% rate, and 10% for general construction, which was above the 8% rate used by the Administration.

Proposed "Reforms" of Corps Processes and Procedures

During the 106th Congress, the Corps came under criticism for the way it evaluates and undertakes projects. Although the issue received media attention in the 107th Congress, it was not directly addressed through legislation. Corps reform was debated during consideration of Water Resource Development Act (WRDA) bills in the 108th Congress; Corps reform reportedly has played a role in recent WRDAs' not being enacted. H.R. 4818 (P.L. 108-447) contains no Corps reform provisions. For more information, see CRS Report RL30928, *Army Corps of Engineers: Reform Issues for the 107th Congress*, by Nicole T. Carter, and CRS Issue Brief IB10133, *Water Resources Development Act (WRDA) and Other Army Corps of Engineers Legislation,* coordinated by Nicole T. Carter.

Everglades

A significant addition to the Corps' mission in recent years is its growing role in large environmental restoration programs, raising concerns that funding for these programs could displace the funding for other water resources activities. (See CRS Issue Brief IB10120, *Army Corps of Engineers Civil Works Program: Issues for Congress,* by Nicole T. Carter and Pervaze A. Sheikh, for more information.) The Corps plays a significant coordination role in the restoration of the Central and Southern Florida ecosystem. The Corps is particularly involved in the planning, construction, and operation of facilities under the Comprehensive Everglades Restoration Plan (CERP) that was authorized by Title VI of the Water Resources Development Act of 2000 (P.L. 106-541). The annual Energy and Water Development Appropriations bill provides funding for the Corps' participation in these efforts. Everglades restoration also receives a significant portion of its funding through the Department of the Interior appropriations bills. For more information on Everglades funding for Interior agencies, see CRS Report RL32306, *Appropriations for FY2005: Interior and Related Agencies*, coordinated by Carol Hardy-Vincent and Susan Boren.

The President's request for FY2005 included a total of $130 million for the Corps' construction projects in the region. The FY2005 request for the Kissimmee River restoration project and the Everglades and South Florida ecosystem restoration project was $18.0 million and $27.0 million, respectively. For the Central and Southern Florida project, the Administration requested $85.6 million; $67 million of this is for CERP. H.R. 4818 (P.L. 108-447) would provide $121.25 million for Everglades restoration, which is less than the $130 million requested by the Administration, and includes $2.25 million for a Florida Keys Water Quality Improvement project. The Kissimmee River project would receive $18 million as requested; the Everglades and South Florida ecosystem restoration project would receive $26 million, and the Central and Southern Florida project $75 million.

Missouri River Management

Although the Missouri River is managed by the Corps, the Missouri River received the most congressional attention in 2004 in the context of S. 2804, the Interior and Related Agencies Appropriations bill for FY2005. A provision to change a trigger that requires the Corps to implement drought conservation measures on the Missouri River remained in S. 2804 after a debate to have it removed during committee markup. The drought conservation measures would have suspended navigational releases from Missouri River reservoirs if storage at the reservoirs falls below a defined level. No similar language was included in the House-passed bill. H.R. 4818 (P.L. 108-447) does not contain a similar provision. For more information on the Missouri River provision, see CRS Report RL32306, *Appropriations for FY2005: Interior and Related Agencies*,

coordinated by Carol Hardy-Vincent and Susan Boren. For more information on Missouri River management, see CRS Issue Brief IB10120, *Army Corps of Engineers Civil Works Program: Issues for Congress,* by Nicole T. Carter and Pervaze A. Sheikh.

In the context of Energy and Water Development Appropriations, the level of funding for Missouri River mitigation measures was the main issue. H.R. 4818 (P.L. 108-447) provides $19 million for Missouri River fish and wildlife recovery. The President's FY2005 budget request was for $69 million; it would have covered expenses associated with environmental measures to comply with the U.S. Fish and Wildlife Service's Biological Opinion to protect three endangered species. The measures covered by the President's request would have included shallow water habitat for the pallid sturgeon and sandbar habitat for two shorebirds. The activities covered by the President's request, unlike previous mitigation, would not have been restricted to river segments used for navigation; the FY2005 request was for activities along the length of the Missouri River from the reservoir at Fort Peck to the confluence of the Missouri River and Mississippi River at St. Louis.

The amount appropriated for mitigation in the Energy and Water Development Appropriations Act of FY2004 had been $18 million. (The President's FY2004 request had been for $22 million.) The Corps reprogrammed $23 million in FY2004 funds to provide for the environmental measures needed to implement the Missouri River Master Manual in the 2004 navigation season.

Title II: Department of the Interior

For the Department of the Interior, the Energy and Water Development bill provides funding for the Bureau of Reclamation (BOR) and the Central Utah Project Completion Account.

Table 5. Energy and Water Development Appropriations Title II: Central Utah Project Completion Account

($ millions)

Program	FY2004	FY2005 Request	House H.R. 4614	P.L. 108-447[b]
Central Utah Project Construction	26.9	30.8	30.8a	30.8
Mitigation and Conservation Activities	9.4	15.5	15.5	15.5
Oversight & Administration	1.7	1.7	1.7	1.7
Total, Central Utah Project	**38.0**	**48.0**	**48.0**	**48.0**

a. Calculated from text of H.Rept. 108-554. House does not give a figure for Central Utah Project Construction.

b. Does not include the modified rescission amount of 0.80% in H.Con.Res. 528.

Central Utah Project

For FY2005, the President requested $48.0 million for the Central Utah Project (CUP) Completion Account, an increase of $10.0 million over the FY2004 enacted amount. The conference agreement also includes $48 million for the CUP completion account.

Table 6. Energy and Water Development Appropriations
Title II: Bureau of Reclamation

($ millions)

Program	FY2004	FY2005 Request	House H.R. 4614	P.L. 108-447[g]
Water and Related Resources [a]	852.4	794.5	860.3[f]	859.5
Loan Program Account [a]	0.2	—	—	—
Policy & Administration [a]	55.2	58.2	58.2	58.2
CVP Restoration Fund [a]	39.4	54.7	54.7	54.7
Calif. Bay-Delta (CALFED)	—	15.0	—	—
Working Capital Fund	(4.5)	—	—	—
Gross Current Authority	**942.7**	**922.3**	**973.2**	**972.3**
CVP Collections [b]	(31.0)	(46.0)	(46.0)	(46.0)
Hydropower Direct Financing Offset [c]	—	(30.0)	—	—
Indian Water Rights	2.1	—	—	—
Net Current Authority [d]	**913.8**	**846.3**	**927.2**	**926.3**
Total, Title II	**980.6**	**970.3**	**1,021.2**	**1,020.3**

Source: H.Rept. 108-554. Budget justifications for FY2005 from the Bureau of Reclamation.

a. Includes an across-the-board rescission of .59% included in the FY2004 Consolidated Appropriations Act, P.L. 108-199, enacted on January 23, 2004.

b. In its request, the Bureau lists this as an "offset"; the House bill does not treat the CVP collections as an offset.

c. The FY2005 request includes a proposal that funds be transferred to the Water and Related Resources account of the Bureau of Reclamation from the Western Area Power Administration (WAPA) account in Title III. The House bill does not include such a transfer.

d. Calculated by CRS.

e. Budget justifications for FY2005 from the Bureau of Reclamation show a request of $828.5 million for the Water and Related Resources Account for FY2005 and a corresponding $956.3 million in Gross Current Authority. The request was amended May 6, 2004, to account for payment of the Sumner Peck settlement agreement out of other government funds.

f. This item was $5M smaller in the original House table.

g. Does not include the modified rescission amount of 0.80% in H.Con.Res. 528.

Bureau of Reclamation Budget In Brief

The FY2005 request for BOR totals $922.3 million in gross current budget authority.[1] This amount is $20.4 million less than enacted for FY2004 in P.L. 108-137, including the rescission of $5.1 million included in the FY2004 Consolidated Appropriations Act (PL. 108-199). The FY2005 request includes a $46 million "offset" for the Central Valley Project (CVP) Restoration

[1] This amount is $34 million less than the Bureau's initial estimate. Budget justifications for FY2005 from the Bureau of Reclamation show a request of $828.5 million for the Water and Related Resources Account for FY2005 (instead of $794.5 as listed in the conference tables) and a corresponding $956.3 million in gross current authority. The BOR budget also includes several permanent appropriations.

Fund, and a Hydropower Direct Financing offset of $30.0 million (transferred from the Western Area Power Administration (WAPA) account in Title III), yielding a "net" current authority of $846.3 million for BOR. The House bill (H.R. 4614) includes $973.2 million in gross current authority; the conference agreement includes $972.3 million. Neither allowance includes the transfer from the WAPA account.

BOR's single largest account, Water and Related Resources, encompasses the agency's traditional programs and projects, including operations and maintenance, the Dam Safety Program, Water and Energy Management Development, and Fish and Wildlife Management and Development, among others. The House bill, H.R. 4614, includes $860 million for the Water and Related Resources account; the conference agreement includes $859.5 million. The BOR requested $794.5 million for this account for FY2005, $57.9 million less than appropriated in P.L. 108-137 for FY2004; however, BOR budget justifications for FY2005 note a request of $828.5 million, which is approximately $24.0 million less than enacted for FY2004. The agency initially requested $34 million for part of a three-year annual payment as part of the Sumner Peck settlement; however, a subsequent decision was made to fund the payment from another government account. An amendment to the request was submitted to Congress on May 6, 2004.

Key Policy Issues—Bureau of Reclamation

Background

Most of the large dams and water diversion structures in the West were built by, or with the assistance of, the Bureau of Reclamation (BOR). Whereas the Army Corps of Engineers built hundreds of flood control and navigation projects, BOR's mission was to develop water supplies, primarily for irrigation to reclaim arid lands in the West. Today, BOR manages hundreds of dams and diversion projects, including more than 300 storage reservoirs in 17 western states. These projects provide water to approximately 10 million acres of farmland and 31 million people. BOR is the largest wholesale supplier of water in the 17 western states and the second largest hydroelectric power producer in the nation. BOR facilities also provide substantial flood control, recreation, and fish and wildlife benefits. At the same time, operations of BOR facilities are often controversial, particularly for their effect on sensitive fish and wildlife species and conflicts among competing water users.

CALFED

Funds have not been appropriated for the California Bay-Delta Restoration Account (Bay-Delta, or CALFED) since FY2000, when the authorization for appropriations expired. However, funds were provided for FY2002, FY2003, and FY2004 for activities that support the CALFED program—but not for the CALFED program account. The Administration requested $15 million for this account for FY2005. For FY2005, the House Committee on Appropriations recommended that no funds be appropriated for CALFED, and no funds are included in the omnibus bill. Consistent with past years, the committee notes it has recommended "no funding (for CALFED) in the absence of authorizing legislation for this multi-year, multi-billion dollar effort." The conference agreement provides, however, a total of $8.5 million from the within the Water and Related Resources Account for certain activities that support the CALFED program. This amount includes $7.5 million for activities that support California Bay-Delta Restoration, as stated in the conference report, plus an "additional" $1.0 million for the Upper San Joaquin River Basin Storage investigation. Other activities receiving funding from the $8.5 million include $1.0 million for Sites Reservoir planning activities, $1.0 million for Shasta Dam enlargement evaluation, and $1.0 million for Los Vaqueros expansion planning. Although the CALFED

program was reauthorized and signed into law October 25, 2004 (H.R. 2888, P.L. 108-361), the appropriations language was not changed. (For more information on CALFED, see CRS Report RL31975, *CALFED Bay-Delta Program: Overview of Institutional and Water Use Issues*, by Betsy A. Cody and Pervaze Sheikh.)

Security

BOR requested $43.2 million for FY2005 for continued heightened safety and security efforts at BOR facilities. The bulk of the request is for facility operations/security. Funding covers such activities as administration of the security program (e.g. surveillance and law enforcement), anti-terrorism activities, and physical emergency security upgrades. (For more information, see CRS Report RL32189, *Terrorism and Security Issues Facing the Water Infrastructure Sector*, by Claudia Copeland and Betsy A. Cody.) Beginning in FY2005, BOR has planned to assign a portion of site security costs to water users for repayment based on existing project cost allocations for operations and maintenance activities; however, conferees have noted concern over the plan and direct BOR to submit a report by May 1, 2005, on reimbursable and non-reimbursable security costs before implementation of the change and that there should be no implementation of the change "until the Congress provides direct instruction to do so."

The House Committee on Appropriations, in H.R. 4614, recommended $43.2 million for site security, and the omnibus bill contains that amount.

Title III: Department of Energy

The Energy and Water Development bill includes funding for most of DOE's programs. Major DOE activities in the bill include research and development on renewable energy and nuclear power, general science, environmental cleanup, and nuclear weapons programs. The Administration's FY2005 request for DOE programs in the Energy and Water Development bill was $23.148 billion, about $1.18 billion more than the amount appropriated for FY2004. (The FY2005 request for DOE's programs for fossil fuels, energy efficiency, the Strategic Petroleum Reserve, and energy statistics, included in the Interior and Related Agencies appropriations bill, was $1.7 billion.) The House bill (H.R. 4614) would have appropriated $22.478 billion. The omnibus bill contains $23.003 billion, less the rescission.

Table 7. Energy and Water Development Appropriations
Title III: Department of Energy

($ millions)

Program	FY2004[a]	FY2005 Request	House H.R. 4614	P.L. 108-447[e]
Energy Supply R&D				
Solar and Renewable[b]	342.4	374.8	343.2	389.1
Electricity Transmission & Distribution	81.9	90.9	75.4	121.2
Nuclear Energy[c]	299.0	299.8	339.5	388.9
Environment, Safety, Health	22.9	30.5	28.0	28.0
Other	—	39.4	31.1	31.1
Adjustments	(8.0)	—		(12.0)
Total, Energy Supply	738.2	835.3	817.1	946.3

Program	FY2004[a]	FY2005 Request	House H.R. 4614	P.L. 108-447[e]
Non-Defense Site Acceleration Completion	162.4	151.9	151.9	151.9
Non-Defense Environmental Services	337.5	291.3	291.3	291.3
Uranium Decontamination and Decommissioning Fund	414.0 (452.0)	500.2 (463.0)	500.2 (463.0)	499.0 (463.0)
Science				
High Energy Physics	733.6	737.4	753.4	742.4
Nuclear Physics	389.6	401.0	415.0	408.0
Basic Energy Sciences	1,010.6	1,063.5	1,076.5	1,113.5
Bio. & Env. R&D	588.5	501.6	571.6	586.6
Fusion	262.6	264.1	276.1	276.1
Advanced Scientific Computing	202.3	204.3	234.3	234.3
Other	308.4	265.3	278.6	278.6
Adjustments	(14.3)	(5.6)	(5.6)	(10.7)
Total, Science	3,482.3	3,431.7	3,600.0	3,628.9
National Nuclear Security Administration (NNSA)				
Weapons	6,235.5	6,568.5	6,514.4	6,226.5
Nuclear Nonproliferation	1,319.8	1,348.6	1,348.6	1,420.4
Naval Reactors	761.9	797.9	807.9	807.9
Office of Administrator	338.0	333.7	356.2	356.2
Total, NNSA	8,655.1	9,048.7	9,027.2	8,811.0
Defense Environmental Management				
Environ. Restoration Privatization	(15.3)	—	—	—
Defense Site Acceleration Completion	5,617.7	5,970.8	5,930.8	6,094.4
Defense Environmental Services	985.3	982.5	958.0	938.0
Total, Defense Env. Man.	6,587.7	6,953.3	6,888.8	7,034.4
Other Defense Activities	670.5	663.6	697.1	692.9
Defense Nuclear Waste	387.7	131.0	131.0	231.0
Total, Defense Activities	16,301.0	16,796.6	16,744.0	16,769.1
Departmental Admin. (net)	92.2	139.9	121.9	118.4
Office of Inspector General	39.2	41.5	41.5	41.5
Power Marketing Administrations (PMAs)				
Southeastern	4.9	5.2	5.2	5.2
Southwestern	28.4	29.4	29.4	29.4
Western	175.8	173.1	173.1	173.1

National Nuclear Security Administration (NNSA)				
Power Marketing Fund (WAPA)	(22.0)	(23.0)	(23.0)	(23.0)
Falcon & Armistad O&M	2.6	2.8	2.8	2.8
Total, PMAs	189.7	187.5	187.5	187.5
FERC	203.2	210.0	210.0	210.0
(revenues)	(203.2)	(210.0)	(210.0)	(210.0)
Civilian Nuclear Waste[d]	188.9	749.0	—	346.0
Total, Title III	**21,967.4**	**23,147.8**	**22,478.3**	**23,002.8**

Source: Department of Energy budget justifications for FY2005 and H.Rept. 108-554.

a. Includes an across-the-board rescission of .59% included in the FY2004 Consolidated Appropriations Act, P.L. 108-199, enacted on January 23, 2004.

b. Includes $26.1 million added to the Solar R&D account by the FY2004 Consolidated Appropriations Act, P.L. 108-199, enacted on January 23, 2004.

c. Includes transfer of programs funded at $113.4 million from Energy Supply—Nuclear Energy to Other Defense Activities.

d. DOE proposes to offset FY2005 appropriations with Nuclear Waste Fee collections, for a net appropriation of zero.

e. Does not include the modified rescission amount of 0.80% in H.Con.Res. 528.

Key Policy Issues—Department of Energy

Renewable Energy

The FY2005 budget request aimed to promote "breakthroughs in hydrogen fuel cells," develop advanced technologies for cellulosic biomass as an energy source, and generally lower the cost of various renewable energy systems, while improving equipment performance and efficiency. The request also proposed competitive solicitations for applied research on technologies that would help curb greenhouse gas emissions.

The request sought $374.8 million for renewables, which is $4.3 million, or 1%, more than the FY2004 appropriation. This comparison includes the use of $13.0 million in prior year balances for FY2004. The funding request included $13.3 million more for Hydrogen (due to increases of $12.1 million for safety and $2.7 million for renewable hydrogen), $8.3 million more for Program Direction, and $3.0 million for a new National Climate Change Technology program. However, it would terminate Program Support (a cut of $4.9 million), cut Biomass Utilization by $15.2 million (to terminate Small Modular Biopower and discontinue congressional earmarks), and cut Concentrating Solar Power by $3.4 million. Also, the request included $90.9 million for the Office of Electricity Transmission and Distribution (OETD), an increase of $9.0 million, or 11%. The primary increase in OETD was for High Temperature Superconductivity.

For FY2005, the House in H.R. 4614 approved $343.2 million for Renewable Energy, which is $31.6 million, or 8%, less than the request. The major part of this reduction is a decrease of $31.0 million, or 33%, for Hydrogen. Most of the decrease for Hydrogen would eliminate support for hydrogen storage "centers of excellence," which the House Appropriations Committee's report states DOE awarded "without full and open competition." Further, the House cut $7.0 million (zero appropriation) for DOE's proposed hydrogen education initiative. Also, there is a cut of $3.0 million (zero appropriation) for the National Climate Change Technology Initiative and an increase of $2.4 million for Concentrating Solar Power.

The conference committee approved $389.1 million for Renewable Energy, which is $14.3 million, or 4%, more than the request. The committee's figure includes $9.5 million more for Biomass/Biofuels, $6.2 million more for Solar Energy, and $3.0 million more for Intergovernmental Program Support. For OETD, the conference approved $121.2 million, which is $30.3 million, or 33%, more than the request.

Relative to the FY2004 appropriation, the conference committee approved $31.6 million, or 9%, more for renewables. This increase includes $13.3 million more for hydrogen, $6.8 million more for Program Direction, and $3.1 million more for Solar Energy. Further, there is a decrease of $1.5 million for Facilities and Infrastructure. Also, the committee approved $39.3 million, or 48%, more for OETD. This includes increases of $21.8 million for R&D, $13.0 million for Electricity Restructuring, and $4.5 million for Program Direction. All these amounts would be reduced by 0.80% with approval of H.Con.Res. 528.

Nuclear Energy

For nuclear energy research and development—including advanced reactors, fuel cycle technology, and nuclear hydrogen production—the conference report provides $513.3 million, about $100 million above the Administration's request and the FY2004 appropriation. The total includes $124.3 million from Other Defense Activities and Naval Reactors for management of the Idaho National Engineering and Environmental Laboratory (INEEL), which is being transferred to the nuclear energy program from DOE's environmental management program.

The House Appropriations Committee had declared the Administration's request inadequate to achieve DOE's stated goal of transforming INEEL—to be renamed Idaho National Laboratory—into the nation's leading center for nuclear power research. The House approved a funding increase of $51.2 million, for a total of $463.8 million.

"The benefits of nuclear power as a clean, reliable, and affordable source of energy are a key to economic and environmental underpinnings of the U.S.," according to DOE's budget justification. However, opponents have criticized DOE's nuclear research program as providing wasteful subsidies to an industry that they believe should be phased out as unacceptably hazardous and economically uncompetitive.

Within the nuclear energy budget, the conference report provides $50.0 million for the Nuclear Power 2010 program, which "is focused on resolving the technical, institutional, and regulatory barriers to the deployment of new nuclear power plants by 2010," according to the DOE budget justification. The Administration had sought $10.2 million for the program, about half the FY2004 appropriation and a third of the FY2003 level.

According to the DOE budget justification, the Nuclear Power 2010 program "will enable an industry decision by 2005 to deploy at least one new advanced nuclear power plant in the U.S." The current phase of the initiative includes site approval, reactor design certification, license applications, detailed design work, and development of improved construction techniques. DOE will pay up to half the cost of these activities. The program is currently helping three utilities seek NRC approval for potential nuclear reactor sites in Illinois, Mississippi, and Virginia. In March and April of 2004, three industry consortia filed applications seeking a total of $650 million over the next several years to design and license new nuclear power plants. The nuclear plant licenses under the program would test the "one step" licensing process established by the Energy Policy Act of 1992 (P.L. 102-486).

The House Appropriations Committee had voted to cut the Nuclear Power 2010 program to $5.0 million in FY2005, contending that NRC should not issue new reactor licenses "in the absence of

a repository for spent nuclear fuel." As discussed in a later section, the Administration's funding request for DOE's waste repository program created considerable friction with the House Appropriations panel and contributed to the absence of a Senate markup.

The conference report includes $40.0 million for the Generation IV Nuclear Energy Systems Initiative, which focuses on more-advanced reactors that could be deployed in the longer term. The conference level is about the same as the amount approved by the House and $10 million above the Administration request.

The Generation IV program is focusing on six advanced designs that could be deployed after 2010: two gas-cooled, one water-cooled, two liquid-metal-cooled, and one molten-salt concept. Some of these reactors would use plutonium recovered through reprocessing of spent nuclear fuel. The Administration's May 2001 *National Energy Policy* report contends that plutonium recovery could reduce the long-term environmental impact of nuclear waste disposal and increase domestic energy supplies. However, opponents contend that the separation of plutonium from spent fuel poses unacceptable environmental risks and, because of plutonium's potential use in nuclear bombs, undermines U.S. policy on nuclear weapons proliferation.

The development of plutonium-fueled reactors in the Generation IV program is closely related to the nuclear energy program's Advanced Fuel Cycle Initiative (AFCI), for which the conference report provides $68.0 million—about the same as the FY2004 level and the amount approved by the House. The Administration had proposed cutting the program to $46.3 million. According to the budget justification, AFCI will "develop advanced, proliferation-resistant nuclear fuel cycle technologies" that could reduce the long-term hazard of spent nuclear fuel and recover additional energy. Such technologies would involve separation of plutonium, uranium, and other long-lived radioactive materials from spent fuel for re-use in a nuclear reactor or for transmutation in a particle accelerator. The program includes longstanding DOE work on electrometallurgical treatment of spent fuel from the Experimental Breeder Reactor II (EBR-II) at INEEL.

In support of President Bush's program to develop hydrogen-fueled vehicles, DOE is requesting $9.0 million in FY2005 for the Nuclear Hydrogen Initiative, nearly a 50% increase from the FY2004 level. The conference report followed the House's lead in providing the full funding request. According to DOE's budget justification, the program would investigate the use of high-temperature nuclear reactors to make hydrogen from water in a thermochemical process. According to DOE, "preliminary estimates . . . indicate that hydrogen produced using nuclear-driven thermochemical or high-temperature electrolysis processes would be only slightly more expensive than gasoline" and result in far less air pollution.

An advanced reactor that would demonstrate co-production of hydrogen and electricity—the Next Generation Nuclear Plant (NGNP)—is allocated $25.0 million from DOE's Generation IV program by the conference report. "The conferees expect the Department to submit a budget in fiscal year 2006 that is consistent with the goal of demonstrating hydrogen production and electricity generation by 2015 at the Idaho National Laboratory," according to the statement of managers.

DOE sought no new funding specifically for the Nuclear Energy Research Initiative (NERI), which provides grants for research on innovative nuclear energy technologies. Instead, according to the budget justification, NERI projects will be pursued at the discretion of individual nuclear R&D programs. NERI received an appropriation of $11 million for FY2004. New funding also was not requested for the Nuclear Energy Plant Optimization program (NEPO), which received $2.9 million in FY2004. The program supports cost-shared research by the nuclear power industry on ways to improve the productivity of existing nuclear plants. Although the House

Appropriations Committee agreed to provide no new funding for NERI and NEPO, the conference report includes $2.5 million for each program.

Science

The DOE Office of Science conducts basic research in six program areas: basic energy sciences, high-energy physics, biological and environmental research, nuclear physics, fusion energy sciences, and advanced scientific computing research. Through these programs, DOE is the third-largest federal supporter of basic research and the largest federal supporter of research in the physical sciences.

For FY2005, DOE requested $3.432 billion for Science. The FY2004 appropriation was $3.482 billion.[2] On this basis, the FY2005 request was a decrease of 1%. Some Administration statements asserted that the request reflected a 2% increase, if the FY2004 baseline was taken to exclude funds provided for specific congressionally directed projects. The House bill provided $3.600 billion. The conference agreement provided $3.629 billion.[3] After taking into account the general reduction of 0.80%, the conference agreement represented an increase of 3% above the FY2004 appropriation.

The requested funding for the largest program, basic energy sciences, was $1.064 billion, an increase of $53 million above the comparable FY2004 appropriation. Nanoscience is a growth area in basic energy sciences. Along with other nanoscience funding, the FY2005 request included $99 million for construction of four Nanoscale Science Research Centers. The House bill provided $1.077 billion for basic energy sciences. Part of the $13 million increase was for additional nanoscience research, and nanoscience center construction was fully funded at the requested level. The conference agreement provided $1.114 billion for basic energy sciences. After the general reduction, this was a 9% increase above FY2004.

The FY2005 request for high-energy physics was $737 million, an increase of $4 million above the comparable FY2004 appropriation. The House bill provided a further increase of $16 million, for a total of $753 million. The conference agreement provided $742 million. After the general reduction, this was a 3% increase above FY2004. The House report expressed support for DOE's collaboration with the National Aeronautics and Space Administration (NASA) on three scientific spacecraft, and encouraged NASA to maintain the planned schedules of these missions, which are in question following the President's announcement in January 2004 of a new vision for NASA.[4] The conference agreement encouraged DOE to proceed with the Dark Energy Mission, but did not mention the other two spacecraft.

The requested funding for biological and environmental research was $502 million, a decrease of $140 million below the comparable FY2004 appropriation. The request noted that the decrease corresponded to $140 million that was provided in FY2004 for congressionally directed projects. The House bill provided $572 million, or $75 million more than requested, but did not include $5 million requested for a new laboratory facility. The House report stated that such facilities should be procured in a more open competition that includes universities and others as well as DOE laboratories. The conference agreement provided $587 million. After the general reduction, this

[2] DOE budget justification documents refer to a "comparable" FY2004 appropriation of $3.500 billion. The difference of $18 million reflects transferred activities that are included in the FY2005 request for Science but were funded in other accounts in FY2004.

[3] Except where noted, all conference agreement amounts in this section are as given in the text of the conference report, i.e. *before* subtracting the 0.80% general reduction.

[4] See CRS Report RS21720, *Space Exploration: Overview of President Bush's New Exploration Initiative for NASA, and Key Issues for Congress*, by Marcia S. Smith.

was a 9% decrease from FY2004; almost all of the decrease resulted from a reduction in funding for congressionally directed projects. The conference agreement included $10 million for the new laboratory facility, but it expressed disagreement with DOE's "strategy of restricting competition for such a facility to only the DOE national laboratories," and it directed DOE to include an alternate, more competitive strategy in the FY2006 budget request.

The request for nuclear physics was $401 million, an increase of $11 million above the comparable FY2004 appropriation. The House bill provided $415 million, a further increase of $14 million. The conference agreement provided $408 million, a 4% increase above FY2004 after applying the general reduction.

The request for fusion energy sciences was $264 million, a $2 million increase above the comparable FY2004 appropriation. In 2003, the United States rejoined negotiations on construction of the International Thermonuclear Experimental Reactor (ITER), a fusion facility whose other participants include China, the European Union, Japan, Russia, and South Korea. The requested FY2005 budget for fusion energy sciences included $7 million devoted directly to ITER preparations, plus another $31 million in supporting activities. The budget impact of ITER in future years, once construction begins, will depend on the outcome of the ongoing negotiations; the U.S. share is generally expected to be in the range of $50 million to $100 million per year. Appropriations conference report language in FY2004 cautioned DOE not to submit "any future budget requests for ITER that are funded at the expense of domestic research." The House bill provided $276 million for fusion energy sciences, $12 million more than the request, even though site selection for ITER has been delayed, which the House report anticipated will result in DOE spending less than planned on ITER in FY2005. The conference agreement provided $276 million, for a 5% increase above FY2004 after applying the general reduction. Also noting the delay in site selection, the conference report directed DOE to reduce its planned expenditures on ITER in FY2005.

The smallest Science program, advanced scientific computing research, was funded at $204 million in the FY2005 request, an increase of $2 million above the FY2004 appropriation. The House bill provided $234 million. The $30 million increase recommended by the House was for development of hardware, software, and applied mathematics for supercomputing, and the House report encouraged DOE to make time on the resulting supercomputer available to external users on a competitive basis. The conference agreement also provided $234 million. After the general reduction, this is an increase of 15% above FY2004. The conference report supported the House language regarding the $30 million increase, and directed that no more than $25 million of it should be devoted to hardware.

The House report and conference report also included general discussion of three major issues: external regulation of laboratories, competition for new facilities, and facility operating time. The House report expressed strong support for external regulation of the DOE Science laboratories and strong displeasure with DOE's "continued intransigence" in moving from self-regulation to external regulation. Both reports advocated open competition for new research facilities and broader participation by universities. Both made mention of the recently published 20-year strategic plan for Office of Science facilities.[5] The House report commended the Office of Science for its efforts in developing quantifiable performance measures, such as facility operating time, for which several individual Science programs received additional funding. The conference report encouraged DOE to request sufficient funds for FY2006 to operate user facilities for as much time as possible.

[5] The facilities plan is available online at http://www.sc.doe.gov/Sub/Facilities_for_future/ facilities_future.htm.

Nuclear Weapons Stockpile Stewardship

Congress established the Stockpile Stewardship Program in the FY1994 National Defense Authorization Act (P.L. 103-160) "to ensure the preservation of the core intellectual and technical competencies of the United States in nuclear weapons." The program is operated by the National Nuclear Security Administration (NNSA), a semiautonomous agency established by Congress in the FY2000 National Defense Authorization Act (P.L. 106-65, Title XXXII) within DOE. It seeks to maintain the safety and reliability of the U.S. nuclear stockpile.

Most stewardship activities take place at the nuclear weapons complex, which consists of three laboratories (Los Alamos National Laboratory, NM; Lawrence Livermore National Laboratory, CA; and Sandia National Laboratories, NM and CA), four production sites (Kansas City Plant, MO; Pantex Plant, TX; Savannah River Site, SC; and Y-12 Plant, TN), and the Nevada Test Site. NNSA manages and sets policy for the complex; contractors to NNSA operate the eight sites.

Stockpile stewardship consists of all activities in NNSA's Weapons Activities account. Appropriations were $4,908.7 million for FY2001, $5,560.2 million for FY2002, and $5,961.3 million for FY2003; Table 7 provides FY2004 and FY2005 data. The three main elements of stockpile stewardship, described next, are Directed Stockpile Work (DSW), Campaigns, and Readiness in Technical Base and Facilities (RTBF); Table 7 presents funding for these elements. NNSA also manages two major programs outside of Weapons Activities: Defense Nuclear Nonproliferation, discussed in a subsequent section of this report, and Naval Reactors.

Table 8. Funding for Weapons Activities

($ millions)

Program	FY2004[a]	FY2005 Request	House H.R. 4614	P.L. 108-447[b]
DSW	1,326.7	1,406.4	1,324.9	1,316.9
Campaigns	2,400.1	2,393.8	2,252.0	2,323.4
RTBF	1,540.6	1,474.5	1,652.5	1,670.4
Otherc	966.1	1,293.7	1,285.0	915.7
Total	**6,233.5**	**6,568.5**	**6,514.4**	**6,226.5**

Source: FY2004 comparable appropriation and FY2005 request: U.S. Department of Energy. Office of Management, Budget, and Administration/ CFO. *FY 2005 Congressional Budget Request.* volume 1, National Nuclear Security Administration. DOE/ME-0032, February 2004, p. 49.

Notes: Details may not add to totals due to rounding. There was no Senate bill.

a. Reflects distribution of a rescission from P.L. 108-199, FY2004 Consolidated Appropriations Act, and adjustments to make FY2004 appropriation categories comparable to those of the FY2005 request.

b. Figures do not reflect an across-the-board reduction of 0.80%.

c. Includes Secure Transportation Asset, Nuclear Weapons Incident Response, Facilities and Infrastructure Recapitalization Program, Safeguards and Security, Safeguards and Security Charge for Reimbursable Work (an offset), use of prior year balances, and (for omnibus bill, FY2005) transfer from Department of Defense Appropriations.

On July 18, 2003, the House passed H.R. 2754, the FY2004 Energy and Water Development Appropriations Bill, 377-26, without amending the Weapons Activities section. Thus, the FY2004 amounts listed below that were recommended by the House Appropriations Committee were accepted by the House. The Senate passed its version of H.R. 2754, 92-0, on September 16, 2003; it adopted no amendments to the Senate Appropriations Committee's bill that changed Weapons

Activities funding. The conference report, H.Rept. 108-357, was ordered to be printed on November 7, 2003. On November 18, 2003, the House agreed to the conference report, 387-36, and the Senate agreed to it by unanimous consent. The President signed the measure into law (P.L. 108-137) on December 1, 2003. The FY2004 Consolidated Appropriations Act imposed an across-the-board rescission of 0.59 percent; it was signed into law (P.L. 108-199) on January 23, 2004.

The FY2005 request includes data from NNSA's Future Years Nuclear Security Program (FYNSP), which projects the budget and components through FY2009.

Table 9. NNSA Future Years Nuclear Security Program

($ millions)

	FY2005	FY2006	FY2007	FY2008	FY2009
DSW	1,406.4	1,521.2	1,648.1	1,778.4	1,812.4
Campaigns	2,393.8	2,526.7	2,516.5	2,395.2	2,401.4
RTBF	1,474.5	1,600.2	1,753.2	1,839.3	1,915.8
Other[a]	1,293.7	1,232.9	1,298.2	1,340.1	1,362.4
Total	6,568.5	6,881.0	7,216.0	7,353.0	7,492.0

Source: Department of Energy, *FY2005 Congressional Budget Request,* vol. 1, p. 50, 63. Figures for the Robust Nuclear Earth Penetrator (RNEP) for the outyears have changed from this budget document, as discussed below. They are in flux, so are not available. RNEP is funded under DSW; this table shows DSW funding as presented in the budget document.

Notes: Details may not add to totals because of rounding.

a. Includes Secure Transportation Asset, Nuclear Weapons Incident Response, Facilities and Infrastructure Recapitalization Program, Safeguards and Security, and Security Charge for Reimbursable Work.

On June 18, 2004, the House Appropriations Committee reported its FY2005 Energy and Water Development Appropriations Bill (H.R. 4614, H.Rept. 108-554). The House approved the bill, as amended, on June 25, by a vote of 370-16. There were no amendments to the Weapons Activities portion of the bill. In the Senate, the Energy and Water Development Appropriations Subcommittee did not report a bill to the full committee, so that committee did not report a bill to the Senate.

The omnibus appropriations bill subsumes nine regular appropriations bills. Of the nine, the Energy and Water Development appropriations bill was the hardest to resolve. Indeed, press reports raised the prospect that that bill might have been excluded from the omnibus, with its programs funded instead through a year-long continuing resolution that would have maintained funding at the FY2004 level. The sticking point was over funding for Yucca Mountain, an underground repository for civilian nuclear waste, which Senator Domenici, the Chairman of the Senate Energy and Water Development Appropriations Subcommittee, favored. (For details on Yucca Mountain, see the "Civilian Nuclear Waste" section in this report.) At the same time, the House had voted to drop funding for several nuclear weapons programs that Representative Hobson, who chaired the House Energy and Water Development Appropriations Subcommittee, had strenuously opposed. The Senate had favored these weapons programs in the FY2004 budget cycle.

According to numerous press reports, the arrangement that broke the logjam was that several nuclear weapons programs (discussed below) were eliminated, reduced, or modified. At the same time, conferees freed up $800 million from various parts of the omnibus bill. Some of this money was used to provide $577 million for Yucca Mountain instead of the $131 million provided by the

House. Further, conferees provided $40.0 million for the chemistry and metallurgy facility replacement project at Los Alamos National Laboratory, NM, compared to $10.0 million in the House bill, and $91.1 million for the Microsystem and Engineering Science Applications project at Sandia National Laboratories, NM, compared to $53.3 million in the House bill. Conferees also added $30.9 million for constructing a Center for Integrated Nanotechnologies, a joint venture between Los Alamos and Sandia National Laboratories to be located at Kirtland AFB, NM.[6]

Directed Stockpile Work (DSW)

This program involves work directly on nuclear weapons in the stockpile, such as monitoring their condition, maintaining them through repairs, refurbishment, life extension, and modifications; R&D in support of specific warheads; and dismantlement. The FY2005 DSW request would support life extension programs for four nuclear warheads: B61 (gravity bomb), W76 (for Trident I and II submarine-launched ballistic missiles), W80 (for cruise missiles), and W87 (for Minuteman III and MX/Peacekeeper intercontinental ballistic missiles). It would fund surveillance and maintenance for nine warhead types, and some management and technology work not linked to a specific warhead.

The FY2004 energy and water development conference report directed DOE and the Department of Defense to prepare a report on the stockpile plan through 2012 so as to see how the stockpile would be adjusted to meet the requirements of the Strategic Offensive Reductions Treaty, which would reduce U.S. and Russian strategic nuclear warheads to 1,700 to 2,200 by December 2012. (See CRS Report RL31448, *Nuclear Arms Control: The Strategic Offensive Reductions Treaty,* for details on that treaty.) That classified report was delivered to Congress on June 1, 2004. In its FY2005 report on energy and water appropriations, the House Appropriations Committee stated that the new stockpile plan "obviates the need for any programmatic acceleration in the Life Extension Program activities for the B61, W76, and W80." To this end, the committee recommended reducing DSW Life Extension Programs by $40.0 million, to $437.4 million, with the reduction taken against the life extension program for the W80. As noted, the House did not amend the Weapons Activities account. The omnibus bill provided $460.8 million, leaving B61 at the requested $117.9 million, increasing W76 to $236.4 million, and reducing W80 to $106.4 million. Following up the stockpile report, the committee directed DOE to submit a report on requirements for the nuclear weapons complex over the next 25 years, due April 30, 2005. The House Appropriations Committee recommended reducing DSW Stockpile Systems by $40.0 million, to $496.1 million, with the reduction taken against such activities for the W80 and W87 "to reduce the significant program increase over current year levels pending the recommendations of the weapons complex review." The omnibus bill reduced DSW Stockpile Systems to $511.1 million, with reductions to the W80 and W87.

Robust Nuclear Earth Penetrator (RNEP) and Advanced Concepts Initiative (ACI) . DSW also includes funds for a study of RNEP, for which $15.0 million was appropriated for FY2003, $15.0 million was requested and $7.5 million appropriated for FY2004, and $27.6 million requested for FY2005. RNEP is part of ACI, which was established to explore future weapons concepts and technologies. Earth penetrators burrow into the ground before detonating in order to destroy underground targets with less explosive yield than a surface-burst weapon would require. (See CRS Report RL32130, *Nuclear Weapon Initiatives: Low-Yield R&D, Advanced Concepts, Earth Penetrators, Test Readiness,* and CRS Report RL32347, *Robust Nuclear Earth Penetrator Budget Request and Plan, FY2005-FY2009*.)

[6] Amol Sharma, "Energy and Water Appropriations: The Battle for Yucca Mountain," *CQ Weekly*, November 27, 2004: 2787.

RNEP is controversial. Supporters argue that it is needed to attack hard and deeply buried targets (such as leadership bunkers or chemical weapons production facilities) in countries of concern, thereby deterring or defeating such nations; critics reply that RNEP would lower the threshold for use of nuclear weapons and prompt other nations to develop nuclear weapons to deter U.S. attack.

Secretary Rumsfeld said in 2003 that RNEP "is a study. It is nothing more and nothing less."[7] The study is examining feasibility and cost. Yet the FY2005 request seems to cast serious doubt on assertions that RNEP is only a study. Beginning with the FY2005 budget cycle, NNSA presented a detailed four-year projection along with the current request. For RNEP, the figures are: FY2005, $27.6 million; FY2006, $95.0 million; FY2007, $145.4 million; FY2008, $128.4 million; and FY2009, $88.4 million, for a five-year total of $484.7 million.[8] Along with the increase, the plan shows RNEP starting—assuming congressional authorization—development engineering, in which the nuclear weapons laboratories produce a completed warhead design, in FY2007, and production engineering, in which the design is adapted for production and a system to manufacture the weapon is created, in FY2009.

An NNSA manager responsible for the program maintained that the budget increase beyond FY2005 is an artifact of the budget process.[9] He stated that the money was inserted in the out years as a "placeholder" to protect the option of proceeding with RNEP. Were this not done, it is argued that NNSA would face two choices that it deems unsatisfactory: (1) By the time the budget for one fiscal year is submitted, the budget for the next fiscal year is largely fixed; without the placeholder, a decision to proceed with RNEP could not be implemented until the second fiscal year. (2) Alternatively, without the placeholder, a decision to proceed with RNEP could be implemented promptly only by taking the needed funds out of other programs. Similarly, the move to development engineering and production engineering reflects how the program might be expected to advance if it proceeds. The official, however, indicated that no decision has been made on whether or not to proceed with RNEP pending completion of the study.

The RNEP study was initially projected to cost $45 million—$15 million a year for FY2003-FY2005—but each year's numbers have changed. For FY2003, delay in submission of a DOD study required by the FY2003 National Defense Authorization Act (P.L. 107-314, Sec. 3146) delayed the start of NNSA's RNEP study; as a result, $6.0 million was spent of the $15.0 million appropriated. For FY2004, Congress cut the RNEP appropriation to $7.5 million. The FY2005 request is $27.6 million, vs. $15.0 million originally planned. Finally, FY2006, not FY2005, will be the last year of the RNEP study; NNSA estimates the FY2006 request at $30 million. The four-year total is about $71 million. NNSA stated that a firm budget estimate for RNEP beyond FY2006 must await completion of the cost study.

According to NNSA, the study's cost has grown for a number of reasons. The $45 million did not take into account participation in the study by Y-12 Plant, which would make components of RNEP, or of Pantex Plant, which would convert existing weapons into RNEPs; their participation adds some $2 million. DOE has imposed additional project management requirements that add $2 million. The rest of the increase comes from a better definition of the requirements of the study, refinement of cost estimates, and an increase in surety (safety, security, and use control) of the

[7] U.S. Department of Defense. "DoD News Briefing—Secretary Rumsfeld and Gen. Myers." May 20, 2003. At http://www.defenselink.mil/transcripts/2003/tr20030520-secdef0207.html.

[8] U.S. Department of Energy. Office of Management, Budget, and Administration/CFO. *FY 2005 Congressional Budget Request.* Volume 1, National Nuclear Security Administration. DOE/ME-0032, February 2004, p. 63. The RNEP budget is available under "Directed Stockpile Work" at http://www.mbe.doe.gov/budget/05budget/index.htm.

[9] Telephone interview, February 10, 2004.

proposed weapon. On the latter point, DOE requires that any modifications of a nuclear weapon look for ways to increase its surety.[10] NNSA says it has found ways to increase RNEP surety, and plans to do so.

The two Armed Services Committees recommended providing the full amount requested for RNEP for FY2005, $27.6 million, and House and Senate floor amendments to delete such funding were rejected. In contrast, the House Appropriations Committee eliminated RNEP and ACI funds for FY2005. It saw these two programs as a "diversion of resources ... from the most serious issues that confront the management of the nation's nuclear deterrent" and "remain[ed] unconvinced" by DOE's assurances that RNEP is only a study and ACI is only to develop weapon design skills. It found that DOE actions "left little doubt that the objective of the program [RNEP and ACI] was to advance the most extreme new nuclear weapon goals irrespective of any reservations expressed by Congress." Accordingly, "[t]he Committee directs the NNSA to focus wholly on its primary mission of maintaining the safety, security, and viability of the existing stockpile." As a part of the compromise discussed earlier, the omnibus bill eliminated funds for RNEP and ACI.

ACI has also been controversial. Critics claimed that its purpose was to develop a low-yield "mini-nuke" that would make nuclear weapons more usable; supporters responded that ACI was not working on a mini-nuke and that ACI would help develop and maintain weapons design expertise. The Administration requested $9.0 million for ACI for FY2005. The House provided no funds for it for reasons just noted. The House Appropriations Committee stated that its priorities are maintaining the stockpile and countering WMD proliferation, and found that DOE's "obsession with launching a new round of nuclear weapons development runs counter to those priorities." While the omnibus bill provided no funds for ACI, the conference report stated that "the same amount is made available for the Reliable Replacement Warhead program to improve the reliability, longevity, and certifiability of existing weapons and their components."

Campaigns

These are "multi-year, multi-functional efforts" that "provide specialized scientific knowledge and technical support to the directed stockpile work on the nuclear weapons stockpile." For FY2005, there are six campaigns, each of which has multiple components: Science; Engineering; Inertial Confinement Fusion and High Yield; Advanced Simulation and Computing; Pit Manufacturing and Certification, and Readiness.

The House Appropriations Committee commended NNSA for "great progress in budgeting by weapons type" (e.g., the amount requested for extending the life of the W80 warhead). On the other hand, it expressed its concern that NNSA's accounting system still did not provide the full cost of weapon refurbishments because it did not assign the cost of campaigns to specific warhead types. Accordingly, "[t]he Committee directs the NNSA to assign the associated life extension costs by weapons type associated with each campaign."

Pit Manufacturing and Certification Campaign . This is perhaps the most controversial campaign at present. It may remain so for some years because one component of it is a facility that may cost several billion dollars and is scheduled to start initial operations in FY2019, and other components of the campaign involve restoring U.S. ability to manufacture pits, a critical nuclear weapon part. Pits are the fissile cores of nuclear warheads that trigger the thermonuclear secondary stage. DOE has had no facility to produce pits for use in stockpiled weapons since it

[10] U.S. Department of Energy. Order DOE O 452.1B, "Nuclear Explosive and Weapon Surety Program," approved August 6, 2001, Section 4(f).

suspended pit production at the Rocky Flats Plant (CO) in 1989. As a result, the United States has been unable to make all-new nuclear warheads of existing or advanced new designs. (See CRS Report RL31993, *Nuclear Warhead 'Pit' Production: Background and Issues for Congress*.) For FY2005, this campaign has five components.

- (1) W88 Pit Manufacturing: When Rocky Flats suspended production, it was making pits for the W88 warhead for the Trident II missile. NNSA has established a facility at Los Alamos National Laboratory that is producing these pits at a low rate, with a target of 10 to 20 pits a year by FY2007.
- (2) W88 Pit Certification: Additional scientific work is underway to provide confidence, without nuclear testing, that the Los Alamos pits will work as intended. These pits cannot be certified for use in the stockpile until they meet the standards being developed.
- (3) Pit Manufacturing Capability. This component will establish technologies to manufacture pits other than for the W88.
- (4) Modern Pit Facility (MPF): NNSA maintains that pits will ultimately develop defects as a result of aging and other unanticipated problems, so that a higher capacity will be needed in the future. Further, it is argued, since it would take many years to complete a higher-capacity facility, work on it must begin promptly. Accordingly, it is planning for MPF, which would be a new facility, first operational in FY2019, with a capacity of at least 125 pits per year. It might cost $2 billion to $4 billion. Critics maintain that the plutonium component of a pit, which is by far the most difficult to fabricate, is likely to deteriorate very slowly, and perhaps in a way that would not impair weapon performance. They further state that the need for the facility is unclear, given anticipated reductions in nuclear weapons, and that MPF is proceeding at too rapid a pace. To address these questions, NNSA is conducting "accelerated aging experiments," in which plutonium of the type used in a pit is mixed with a greater-than-usual amount of a more radioactive plutonium isotope to simulate more quickly the effects of aging.
- (5) Pit Campaign Support Activities at Nevada Test Site: NNSA plans to conduct certain experiments at Nevada Test Site to support W88 pit certification.

This campaign has attracted much congressional interest. For FY2002, the House Appropriations Committee asserted that DOE cannot show "that it has a viable plan to manufacture and certify pits on the schedule dictated by national security needs," criticized the project as "years behind schedule and hundreds of millions of dollars over the original cost estimate," and stated that it would judge NNSA's success on how well the pit project succeeds (H.Rept. 107-112). The Senate Appropriations Committee viewed the then-current schedule, which would not certify a pit for use in the stockpile until FY2009, as "unacceptable" (S.Rept. 107-39).

In its FY2003 report, the Senate Appropriations Committee stated that it "remains greatly concerned about the NNSA's refusal to request funds consistent with its own project plan submitted less than 1 year ago." Because this was not done, "the Committee has been forced to reduce other items in the budget." The final appropriation provided more funds than requested. According to the joint explanatory statement of the Committee of Conference, "The increase will ensure that the NNSA maintains its commitment to produce a certifiable W88 pit by 2003 and a certified W88 pit by 2007."

For FY2004, the Administration requested a substantial increase to items in this campaign. The House Appropriations Committee saw the campaign as proceeding too quickly. It recommended reducing the request for this campaign substantially. It praised NNSA and Los Alamos National

Laboratory for "turning around" this campaign, but urged NNSA to reduce costs. It stated that the current plan would "aggressively pursue a multi-billion dollar Modern Pit Facility before the first production pit has even been successfully certified for use in the stockpile" and recommended "a less aggressive planning approach" to MPF. The Senate Appropriations Committee recommended the amount requested for this campaign. The Feinstein amendment (S.Amdt. 1655) discussed under DSW, which was tabled, would have barred use of funds for MPF site selection. Conferees provided the full amount requested for manufacturing and certifying the W88 pit, but reduced MPF funding from $22.8 million to $10.8 million: "The conferees agree with the House Report that until the Congress reviews the revised future Stockpile plan it is premature to pursue further decisions regarding the Modern Pit Facility."

The FY2005 request (with FY2004 funding in parentheses) includes $132.0 million ($125.0 million) for W88 pit manufacturing, $101.5 million ($108.6 million) for W88 pit certification, $21.0 ($10.0 million) for pit manufacturing capability, $29.8 million ($10.8 million) for MPF, and $52.2 million ($42.4 million) for pit campaign support activities at Nevada Test Site.

The House Appropriations Committee raised concerns about proceeding with MPF until the need for that facility is validated. It "will consider a modern pit facility design only when the [accelerated] pit aging experiments are completed and the future MPF requirements as a function of the 2012 stockpile and the expanded TA-55 production capability are determined." (TA-55 is the facility at Los Alamos used for making pits.) In contrast, it favored accelerating efforts to expand capability at TA-55 as a near-term hedge. Accordingly, the committee commended Los Alamos's work to restore pit manufacturing capability at TA-55, adding $10.0 million to W88 pit manufacturing to accelerate this work, and eliminated the $29.8 million requested for MPF. It provided the amount requested for W88 pit certification and for pit campaign support activities at Nevada Test Site. It eliminated the $21.0 million requested for pit manufacturing capability on grounds that "work on pit manufacturing should be focused on expansion of the pit production capability of TA-55." The omnibus bill provided the requested amounts for W88 pit manufacturing and pit campaign support activities at NTS. It cut W88 pit certification to $61.0 million and pit manufacturing capability to $13.5 million. Further, it reduced MPF to $7.0 million: "The conferees agree that funding for Modern Pit Facility cannot be used to select a construction site in fiscal year 2005."

Other Campaigns . The House Appropriations Committee acted on numerous other campaigns, as presented in its report on FY2005 energy and water appropriations. Provisions in the omnibus bill are noted here as well.

- The Primary Assessment Technologies Campaign, a Science Campaign, seeks to develop the ability to certify the safety and performance of aged or rebuilt primaries without nuclear testing.[11] Part of the campaign is to enhance test readiness, or to reduce the time needed to conduct a nuclear test following a presidential order to test. The request was $81.5 million; the House reduced that figure to $66.5 million, as discussed in more detail under "Nuclear Testing and Test Readiness," below. The omnibus bill provided $74.0 million. The conference report stated, "Within Primary Assessment Technologies, NNSA is directed to fund the Nevada Test Site [NTS] to maintain the critical personnel skills and institutional viability in direct support of the subcritical experiment program."

[11] Department of Energy, *2005 Congressional Budget Request.* Volume 1, p. 86. The "primary"—the first stage in a thermonuclear warhead—typically involves the implosion of plutonium to create a nuclear explosion that is then harnessed to drive the "secondary" stage, which releases most of the weapon's energy through fission and fusion.

- The House reduced the Nuclear Survivability Campaign, an Engineering Campaign, by $15.0 million, leaving $9.5 million. The House Appropriations Committee questioned its "high level of funding," given that its purpose is "to assess the ability of weapons in the stockpile to continue to function as designed during a massive nuclear exchange. In the post-Cold War world ... this activity is a waste of scarce resources." The omnibus conference report also provided $9.5 million.
- The National Ignition Facility (NIF) is part of the Inertial Confinement Fusion and High Yield Campaign. NIF is to be the world's largest laser. It is under construction at Lawrence Livermore National Laboratory. The House provided the amount requested for NIF construction, $130.0 million. The House Appropriations Committee expressed concern that NNSA's commitment to NIF seemed uncertain because NNSA had delayed the date for ignition from 2010 to 2014. Accordingly, the committee directed that no funds be spent on NIF to add capabilities not in the project's baseline until ignition is attempted in 2010. The omnibus conference report also provided $130.0 million for NIF construction.
- The House reduced funding for the Advanced Simulation and Computing Campaign from $741.3 million to $666.3 million. The House Appropriations Committee stated that it wanted to work with NNSA to develop program products and milestones so that progress would be "transparent." The House defeated an amendment by Representative Sanders that would have transferred $30.0 million from this campaign to renewable energy R&D. The omnibus bill provided $703.8 million, halfway between the request and the House position.

Readiness in Technical Base and Facilities (RTBF)

This program provides infrastructure and operations at the nuclear weapons complex sites. It has six subprograms. By far the largest is Operations of Facilities ($1,021.7 million adjusted appropriation for FY2004, $1,017.6 million requested for FY2005). Others include Program Readiness, which supports activities occurring at multiple sites or in multiple programs ($115.8 million adjusted appropriation for FY2004, $106.2 million requested for FY2005), and Material Recycle and Recovery, which recovers plutonium, enriched uranium, and tritium from weapons production and disassembly ($75.7 million adjusted appropriation for FY2004, $87.0 requested for FY2005). Construction is a separate category within RTBF; the adjusted appropriation for FY2004 was $258.9 million, and the FY2005 request is $206.3 million.

For FY2004, the House Appropriations Committee recommended a reduction of $102.4 million from the request. Details include $997.8 million for Operations of Facilities, with an increase of $20.0 million for Pantex Plant (TX) and $5.0 million for Y-12 Plant (TN); $106.2 million for Program Readiness, reflecting the elimination of funds for Enhanced Test Readiness (discussed below); $76.2 million, as requested, for Material Recycle and Recovery; and $178.9 million for construction, with almost all the reduction resulting from eliminating funds requested for three projects ($20.0 million, exterior communications infrastructure modernization, Sandia National Laboratories; $50.0 million, national security sciences building, and $20.5 million, chemistry and metallurgy facility replacement project, both at Los Alamos National Laboratory).

The Senate Appropriations Committee recommended adding $118.1 million to RTBF for FY2004. Of the increase, $117.0 million went to Operations of Facilities, including $25.0 million for the National Center for Combating Terrorism, $10.0 million for Pantex Plant, $10.0 million for Y-12 Plant, $20.0 million for Kansas City Plant (MO), $15.0 million for Lawrence Livermore

National Laboratory, $20.0 million for Los Alamos National Laboratory, and $8.0 million for Sandia National Laboratories.

Conferees provided $1,664.2 million for RTBF for FY2004, an increase of $50.8 million over the request. The main items of difference between the conference bill and the request were Operations of Facilities (a $30.0 million increase), Special Projects (an increase of $8.7 million), and Chemistry and Metallurgy Facility Replacement Project, Los Alamos National Laboratory (a $10.5 million decrease). The increase in funding for Operations of Facilities was distributed as follows: $5.0 million apiece to Pantex Plant, Y-12 Plant, Kansas City Plant, and Nevada Test Site, and $10.0 million to Los Alamos.

For FY2005, the House provided $1,652.5 million for RTBF, an increase of $178.0 million. Of the RTBF components, the House increased Operations of Facilities by $134.0 million, with all but $4.0 million of that going to maintenance of production facilities at Pantex Plant, Kansas City Plant, and Y-12 Plant. It reduced Program Readiness by $5.0 million, to $101.2 million; provided the requested amount, $87.0 million, for Material Recycle and Recovery; and increased Construction from $206.3 million to $260.3 million. The omnibus bill provided $1,670.4 for RTBF. Most components were funded at the requested level; the two largest increases were for Operation of Facilities ($1,017.6 million requested, $1,121.6 million provided) and Highly Enriched Uranium Facility at Y-12 Plant ($64.0 million requested, $114.0 million provided).

Other Programs

Weapons Activities includes four smaller programs in addition to DSW, Campaigns, and RTBF.

- Secure Transportation Asset provides for the transport of nuclear weapons, components, and materials safely and securely. It includes special vehicles used for this purpose, communications and other supporting infrastructure, and threat response. The FY2004 adjusted appropriation was $113.5 million. The FY2005 request is $201.3 million; the House and the omnibus bill provided that amount.
- Nuclear Weapons Incident Response provides for use of DOE assets to manage and respond to a nuclear or radiological emergency within DOE, in the United States, or abroad. Formerly a part of RTBF, it is a separate item in the FY2005 budget. The FY2004 adjusted appropriation was $89.2 million. The FY2005 request is $99.2 million; the House and the omnibus bill provided that amount.
- Facilities and Infrastructure Recapitalization Program provides for deferred maintenance and infrastructure improvements for the nuclear weapons complex. In contrast, RTBF "ensure[s] that facilities necessary for immediate programmatic workload activities are maintained sufficiently," according to NNSA. The FY2004 adjusted appropriation was $238.8 million. The FY2005 request is $316.2 million; the House and the omnibus bill provided $273.5 million.
- Safeguards and Security provides operations and maintenance funds for physical and cyber security, and related construction, to protect NNSA personnel and assets from terrorist and other threats. The FY2004 adjusted appropriation was $553.5 million. The FY2005 request is $707.0 million; the House provided $741.0 million and the omnibus bill provided $757.7 million.

Nuclear Testing and Test Readiness

A key issue is whether the United States can continue to maintain its weapons through the Stockpile Stewardship Program without nuclear testing. While that program has sought to do so, statements in early 2002 implied a reduced commitment to that approach. Secretary of Defense Donald Rumsfeld reportedly said that nations with nuclear weapons have "a responsibility to see that they are safe and reliable. To the extent that can be done without testing, clearly that is the preference. And that is why the President has concluded that, thus far, that is the case."[12] J. D. Crouch, Assistant Secretary of Defense for International Security Policy, stated that there is "no change in the Administration's policy at this point on nuclear testing. We continue to oppose CTBT [Comprehensive Test Ban Treaty] ratification. We also continue to adhere to a testing moratorium."[13]

Of particular interest is readiness to conduct a nuclear test. Since FY1996, U.S. policy has been that NNSA (or DOE prior to NNSA's establishment) should be ready to conduct a nuclear test within 24 to 36 months from the time the order is given. Several studies identified work needed to reduce this time to 18 months. These studies were funded by "Enhanced Test Readiness." The FY2004 budget document stated, "The DOD and the NNSA agreed to transition to an 18-month test readiness posture while continuing to review the optimum posture. The actions necessary for moving toward an 18-month posture are expected to begin upon completion of the final FY 2003 appropriation." The Senate Armed Services Committee's bill for FY2004 national defense authorizations, S. 1050, section 3132, required an 18-month posture unless the Secretary of Energy determined that a different posture was preferable. NNSA, however, prepared a study in April 2003 that concluded that an 18-month posture was preferable.[14] Meanwhile, through FY2003, funds in the "Nevada Site Readiness" account maintained the 24- to 36-month posture with ongoing work at the Nevada Test Site. Because no policy decision had been reached on reducing the time needed to test, the Enhanced Test Readiness and Nevada Site Readiness accounts had to be kept separated. With the move to an 18-month test readiness posture, the enhanced posture was expected to become the current posture, which would have made this separation unnecessary. Accordingly, the two accounts were expected to be merged into "Test Readiness" beginning in FY2004, depending on congressional language, though the FY2004 NNSA budget request level did not reflect that merger.

The FY2003 appropriation for enhanced test readiness was $15.0 million. Conferees on the Consolidated Appropriations Resolution for FY2003 directed DOE to notify the Appropriations Committees before obligating any of these funds in FY2003 (H.Rept. 108-10). The FY2004 request for Test Readiness was $24.9 million, and for Nevada Site Readiness was $39.6 million.

In its FY2004 report, the House Appropriations Committee sharply criticized the plan for enhanced test readiness and recommended eliminating FY2004 funds for it. The committee expressed its concern over an "open-ended commitment" to enhanced test readiness "without any budget analysis or program plan to evaluate the efficiency or effectiveness of this funding increase," argued that the proposal "does not address the fundamental difficulties in maintaining test readiness during a testing moratorium," and noted that it took 18-24 months to conduct a fully-instrumented test during the era of routine testing so that a proposal to maintain indefinitely an 18-month posture during the testing moratorium "reflects a disturbing 'cost is no object'

[12] Walter Pincus, "Nuclear Arms Plan: Saving, Not Scrapping," *Washington Post*, January 9, 2002: 4.

[13] U.S. Department of Defense. News Transcript. *Special Briefing on the Nuclear Posture Review*, presented by J. D. Crouch, Assistant Secretary of Defense for International Security Policy, January 9, 2002.

[14] U.S. Department of Energy. National Nuclear Security Administration. *Report to Congress: Nuclear Test Readiness.* April 2003, 15 p.

perspective." Finally, even though NNSA and DOD decided to move to an 18-month test readiness posture, "The Committee does not recognize the NNSA declaring a revised test readiness posture as a new requirement nor is it convinced that the decision can be successfully implemented based on the planning information provided to date" (H.Rept. 108-212). The Senate Appropriations Committee made no reference to nuclear test readiness, and provided the amount requested for Program Readiness, the component of RTBF containing test readiness funds. The Feinstein amendment (S.Amdt. 1655) discussed under DSW, which was tabled, would have barred use of funds provided by H.R. 2754 for modifying the test readiness posture to a posture of less than 24 months. Conferees provided $24.9 million for test readiness, as requested, on grounds that test readiness had atrophied. "However, the conferees expect the NNSA to focus on restoring a rigorous test readiness program that is capable of meeting the current 24-month requirement before requesting significant additional funds to pursue a more aggressive goal of an 18-month readiness posture" (H.Rept. 108-357).

Test Readiness had been in RTBF through FY2004, but was transferred to the Science Campaign in the FY2005 budget. (With the transfer, the name "Test Readiness" was dropped; the NNSA request refers to the program as "efforts related to maintaining the readiness of the Nevada Test Site to conduct underground nuclear tests, if directed.") Funds for test readiness are contained in the Primary Assessment Technologies campaign. The FY2005 request for that campaign is $81.5 million, a figure that the House reduced by $15.0 million. The House Appropriations Committee report stated this reduction was made

> to limit the enhanced test readiness initiative to the goal of achieving a 24-month test readiness posture. The Committee continues to oppose the 18-month test readiness posture and refers the Department [of Energy] to the unambiguous Congressional language provided in the fiscal year 2004 Conference Report requiring the Department to achieve and maintain a 24-month test readiness posture.

The omnibus bill provided $74.0 million for this campaign, halfway between the House figure and the request.

Nonproliferation and National Security Programs

DOE's nonproliferation and national security programs provide technical capabilities to support U.S. efforts to prevent, detect, and counter the spread of nuclear weapons worldwide. These nonproliferation and national security programs are included in the National Nuclear Security Administration.

Funding for these programs in FY2004 was $1.3198 billion. For FY2005, the Administration requested $1.3486 billion. The House bill, H.R. 4614, included the requested amount, but distributed the funding differently among the various programs. The omnibus bill, H.R. 4818 (P.L. 108-447), appropriated $1.4354 billion.

In particular, the Nonproliferation and Verification R&D program, which received $232 million for FY2004, would have been funded at $220 million in the Administration's FY2005 request, and $241.5 million in the House bill. The omnibus bill appropriated $225.7 million. Nonproliferation and International Security programs would have received $124 million in the request and the House bill, compared with $110.1 million in FY2004. These programs include international safeguards, export controls, and treaties and agreements. The omnibus bill funded them at $154 million.

International Materials Protection, Control and Accounting (MPC&A), which is concerned with reducing the threat posed by unsecured Russian weapons and weapons-usable material, would have received $238 million under the President's request, compared to $258.5 million

appropriated for FY2004. The House bill would have increased that amount to $415.3 million. The final omnibus bill appropriated $322 million. Included in the MPC&A program is the "Megaports initiative," which is intended to install radiation detection equipment at the top 20 major overseas seaports to interdict nuclear material before it arrives in the United States. The FY2005 request for Megaports activities was $15 million; the House bill boosted funding to $45 million. The omnibus bill appropriated the requested $15 million.

Two programs in the former Soviet Union, Initiatives for Proliferation Prevention (IPP) and the Nuclear Cities Initiatives (NCI), have been combined into a single program called "Russian Transition Initiative," aimed at finding non-weapons employment for roughly 35,000 under-employed nuclear scientists from the former Soviet weapons complex. The FY2005 request for the program was $41 million, compared to $40 million in FY2004, and that amount was included in the final omnibus bill.

Table 10. DOE Defense Nuclear Nonproliferation Programs

($ millions)

Program	FY2004	FY2005 Request	House H.R. 4614	P.L. 108-447[a]
Nonproliferation & Verification R&D	232.0	220.0	241.5	225.8
Nonproliferation & International Security	110.1	124.0	124.0	154.0
International Materials Protection, Control and Accounting (MPC&A)	258.5	238.0	415.3	322.0
Russian Transition Initiative	39.8	41.0	41.0	41.0
Elimination of Weapons-Grade Plutonium Production	65.0	50.1	15.1	40.1
HEU Transparency Implementation	17.9	21.0	21.0	21.0
Fissile Materials Disposition	652.8	649.0	483.3	624.0
Offsite Source Recovery Project	—	5.6	7.6	7.6
Adjustments	(56.3)	—	—	—
Total, Defense Nuclear Nonproliferation	**1,319.8**	**1,348.6**	**1,348.6**	**1,435.4**

a. Figures do not include an across-the-board cut of 0.80%.

Requested funding for the Fissile Materials Disposition program for FY2005 was $649 million, compared with $653 million in FY2004. The program's goal is disposal of U.S. surplus weapons plutonium by converting it into fuel for commercial power reactors, including construction of a facility to convert the plutonium to reactor fuel at Savannah River, SC, and a similar program in Russia. The House bill cut that amount to $483 million. The final omnibus bill appropriated $624 million.

(For details on these programs, see CRS Issue Brief IB10091, *Nuclear Nonproliferation Issues*, by Carl E. Behrens.)

Environmental Management

The conference agreement on H.R. 4818 (P.L. 108-447) would provide a total of $7.51 billion in FY2005 for DOE's Environmental Management Program, subject to an across-the-board rescission of .80%. Prior to this rescission, the appropriation in the conference agreement is $80

million more than the Administration's request of $7.43 billion, and is $440 million more than the FY2004 appropriation of $7.07 billion.

The Environmental Management Program is the largest single function within DOE in terms of funding, representing approximately one third of the department's total budget. The primary purpose of the program is to manage radioactive and hazardous wastes, and to remediate contamination from such wastes, at former nuclear weapons sites across the country. The program also addresses waste management and remediation at sites where civilian nuclear energy research was conducted by the federal government. As such, DOE's Environmental Management Program is the largest waste management and environmental cleanup program throughout the federal government. In comparison, annual funding for the cleanup of non-radioactive contamination at Department of Defense sites has been less than $2 billion in recent years, and annual funding for the Environmental Protection Agency's cleanup of the nation's most hazardous private sector sites under the Superfund program has been around $1.25 billion in recent years.

DOE's Environmental Management Program has a lengthy history with many longstanding issues. Much attention has focused on the amount of time and money needed to clean up environmental contamination resulting from the production of nuclear weapons during the Cold War. Since the beginning of the U.S. atomic energy program in the 1940's, DOE and its predecessors have been responsible for administering the production of nuclear weapons and managing radioactive and other hazardous wastes. In later years, DOE expanded its efforts to include the environmental restoration of radioactive sites and those with other hazardous contamination in buildings, soil, and water to ensure their safety for future uses. In 1989, the first Bush Administration established the Environmental Management Program within DOE to consolidate the agency's efforts in cleaning up contamination from defense nuclear waste and civilian nuclear energy research. DOE is responsible for complying with numerous federal environmental laws and regulations in administering the current program, and is subject to fines and penalties for violations of these requirements. Consequently, DOE has signed numerous legally binding compliance agreements with the Environmental Protection Agency and the states to perform cleanup activities and dispose of wastes according to specific deadlines.

DOE reports that there are 114 geographic sites in 31 states and one U.S. territory where the production of nuclear weapons, and civilian nuclear energy research and development activities, resulted in radioactive and other hazardous contamination. Together, these sites occupy approximately 2 million acres, which is equivalent to the land area of Rhode Island and Delaware combined. DOE reports that all response actions were complete at 76 sites as of the end of FY2003, at a cost of approximately $70 billion. DOE expects cleanup to be complete at 3 additional sites by the end of FY2005. However, most of the sites that have been cleaned up thus far are relatively small and are among the least hazardous. The sites where cleanup remains underway contain some of the most severely contaminated areas. DOE estimates that cleanup at the remaining sites will not be complete until 2035, at a cost of $142 billion. DOE had previously estimated that cleanup would not be complete until a later date of 2070, at a higher cost of $192 billion.

DOE has substantially revised its earlier estimates of cleanup time frames and costs, as part of its cleanup reform initiative. DOE launched this initiative in FY2003 and has signed letters of intent with the Environmental Protection Agency and the states to accelerate cleanup at its major sites. DOE also has prepared Performance Management Plans for many of its sites, which outline how cleanup would be accelerated and costs reduced. According to DOE, these goals would be accomplished by assessing the risk of exposure to determine which cleanup remedies are selected. Risk is currently one of many factors that DOE uses to select cleanup remedies. Altering the current process to use risk as the primary factor could result in decisions to contain waste on site

as a means of preventing exposure, rather than removing it. Whereas containment can often be accomplished more quickly and at less cost, the possibility of future exposure remains if the method of containment fails over time.

Although there has been widespread concern about the amount of time and money needed to clean up nuclear waste sites, questions have been raised as to how DOE would use a risk-based approach to accomplish its goals of faster and less costly cleanups without weakening environmental protection. Some have drawn attention to the possibility that more contamination may be left on site, rather than removed. Because of the substantial amount of time required for certain types of radioactivity to decay, arguments have been raised that contamination left in place may migrate in unexpected ways over the long-term, and result in pathways of exposure that could not have been predicted when the remedy was originally selected. Others counter that completely removing radioactive contamination from all sites to permit unrestricted future land use, and eliminate all future pathways of exposure, would not be economically feasible, and in some cases would be beyond the capabilities of current cleanup technologies.

DOE's cleanup reform initiative would continue in FY2005, with funding provided under five accounts. These accounts include two for Site Acceleration Completion, one for Defense and one for Non-defense, which fund efforts to complete cleanup and close contaminated facilities at a faster pace than previously scheduled. There also are two Environmental Services accounts, one for Defense and one for Non-defense as well, which fund activities that indirectly support the mission of accelerated cleanup and closure, such as policy development and coordination, and the integration of mission activities across the complex of sites. A fifth account for the Uranium Enrichment Decontamination and Decommissioning Fund supports the cleanup of uranium enrichment plants and uranium and thorium processing sites, which previously had been included in an account entitled Uranium Facilities Maintenance and Remediation.

Defense sites have traditionally received the vast majority of funding under the Environmental Management Program. Of the $7.51 billion appropriation for the program in omnibus H.R. 4818 (P.L. 108-447), $6.10 billion would be allocated to the Defense Site Acceleration Completion Account, and $938 million would be allocated to the Defense Environmental Services Account. The Non-defense Site Acceleration Completion Account would receive $152 million, and the Non-defense Environmental Services Account would receive $291 million. The Uranium Enrichment Decontamination and Decommissioning Fund would receive $499 million. Although the total appropriation for these five accounts would be $7.98 billion, this amount is offset by $463 million in federal contribution to the Uranium fund, which yields a total amount of $7.51 billion for the Environmental Management Program in FY2005, subject to an across-the-board rescission of .80% as noted above.

The most controversial issue regarding funding for the Environmental Management Program in FY2005 was DOE's "High-level Waste Proposal," for which the President's budget proposed to set aside $350 million out of the Defense Site Acceleration Completion Account. Under this proposal, DOE would speed the closure of tanks storing high-level radioactive and other chemical wastes at the Hanford site in Washington state, the Savannah River site in South Carolina, and the Idaho National Engineering and Environmental Laboratory (INEEL). The volume of these wastes is substantial. For example, DOE reports that at the Hanford site there are over 50 million gallons of high-level radioactive and chemical wastes stored beneath the surface in 177 tanks. The tank wastes at Hanford, and the other two sites, that are classified as "high-level" radioactive wastes must be removed and safely stored in a centralized geologic repository, as required by the Nuclear Waste Policy Act (NWPA). For more information, see CRS Report RL32163, *Radioactive Waste Streams: An Overview of Waste Classification for Disposal*, by Anthony Andrews.

DOE has proposed to speed the closure of the tanks at these three sites by classifying some of the waste as "incidental to reprocessing," and to dispose of it as low-level waste by mixing and immobilizing it with a cement "grout" inside the tank. DOE issued this proposal under an internal agency "order" (Order 435.1).[15] Some Members of Congress, states, environmental organizations, and communities opposed DOE's proposal, arguing that none of the tank wastes should be allowed to remain in place because of the possibility that the grout might not mix thoroughly with the waste to contain it safely and prevent leaks. However, others asserted that methods to remove all of the tank residues would generate a new hazardous waste stream that would need to be managed properly to prevent exposure. There also could be significant risks of exposure to workers who would remove the residues.

Thus far, DOE has grouted high-level radioactive wastes in two tanks at the Savannah River site. The Natural Resources Defense Council (NRDC) legally challenged DOE's authority to dispose of these wastes in this manner. In 2003, the U.S. District Court for Idaho ruled that DOE does not have the authority to classify the tank wastes at the Savannah River site, or any other site, as anything other than high-level radioactive waste.[16] Consequently, these wastes would have to be removed and disposed of in a centralized geologic repository as required by the NWPA.

DOE appealed the 2003 ruling, and on November 5, 2004, the U.S. Court of Appeals for the Ninth Circuit reversed the above district court opinion, ruling that the challenge to Order 435.1 was not "ripe" for review.[17] The court found that the district court decision predated DOE application of Order 435.1 to a particular situation, and, thus, there was no present conflict with the NWPA.[18] The court determined that while it was possible that DOE might violate the NWPA at some point, it might just as likely comply with all applicable law.[19] Thus, under the terms of the circuit court opinion, DOE may engage in activities pursuant to Order 435.1, and NRDC or others then would be free to bring suit if they believe those activities violate the law.

Prior to the appeals court ruling, the Secretary of Energy asked Congress to enact legislation that would provide DOE with statutory authority to classify some of the tank wastes as incidental to reprocessing at Hanford, Savannah River, and the INEEL, thereby exempting them from disposal requirements for high-level radioactive waste in the NWPA. Whether the wastes could be left in the tanks and grouted in place would ultimately depend on the concurrence of state regulatory agencies who issue the permits for tank closures.

Congress included authority in the Ronald W. Reagan National Defense Authorization Act for FY2005 (P.L. 108-375) for DOE to grout some of the tank wastes at Savannah River and the INEEL. However, the authority was not extended to Hanford, where most of the leaking tanks are located. As noted above, DOE still may pursue the grouting of tanks at Hanford under Order 435.1, but could be subject to legal challenge at that site. (For further discussion, see CRS Report RS21988, *Radioactive Tank Wastes: Disposal Authority in the Ronald W. Reagan National Defense Authorization Act for FY2005*, coordinated by David Bearden.)

From the appropriation for the Defense Site Acceleration Completion Account, H.R. 4818 (P.L. 108-447) would provide $292 million of the $350 million that the Administration requested for its High-level Waste Proposal. Of the $292 million, $163 million would be allocated to the Savannah River site in South Carolina for projects to prepare for the grouting of tank wastes, and $97

[15] Department of Energy. DOE Order 435.1: Radioactive Waste Management.

[16] NRDC v. Abraham, 271 F. Supp. 2d. 1260 (D. Id. 2003).

[17] Natural Resources Defense Council v. Abraham, No. 03-35711, 2004 WL 2480949 (Nov. 5, 2004).

[18] Natural Resources Defense Council, slip op. at 3.

[19] Id. at 4.

million would be allocated to the INEEL in Idaho for such projects. The remaining appropriation of $32 million would be allocated to Hanford in Washington state. However, it appears questionable whether this appropriation for Hanford would be sufficient legal authority to permit the grouting of tank wastes at that site, as the waste disposal authority in P.L. 108-375 does not include Washington state.

There are differing court rulings regarding whether an appropriation of funding by Congress for a specific activity alone provides sufficient authority for an agency to carry out that activity, absent authority provided in other statutes or in apparent contradiction of pre-existing authority. In short, Congress can effectively validate otherwise unauthorized or unlawful action in an appropriations act by clearly indicating that it intends to alter or repeal pre-existing law, in addition to funding an activity. Whether an appropriation for a specific activity constitutes an authorization may be subject to some argument and possible legal challenge, unless Congress explicitly addresses the authority in question.[20] The conference report language allocating an appropriation of $32 million for "waste incidental to reprocessing" activities at the Hanford site in FY2005 does not expressly mention the grouting of tank wastes, raising the question of the authority for the use of this disposal method at that site.

In addition to the issue of how to dispose of radioactive tank wastes, there also has been ongoing concern in Congress about the feasibility of DOE's overall plans to accelerate cleanup and lower costs at the 114 sites across the country that make up the former defense nuclear weapons complex. Prior to the conference agreement on H.R. 4818 (P.L. 108-447), the House Appropriations Committee noted in its report on H.R. 4614 (H.Rept. 108-554) that recent delays in cleanup schedules and cost overruns of certain projects raise questions regarding DOE's ability to accelerate cleanup. The committee also raised concerns regarding DOE's delay in submitting a report to Congress on statutory changes that may be necessary to allow accelerated cleanup to proceed, and the need for agreements with the states on all elements of the Performance Management Plans for each site. These plans outline how accelerated cleanup would be accomplished.

In addition to funding for the Environmental Management Program, the conference agreement on H.R. 4818 (P.L. 108-447) would appropriate $78 million for DOE's Office of Legacy Management. The Administration had requested $66 million, the same as the FY2004 appropriation. Of the amount in H.R. 4818 (P.L. 108-447), $47 million would be allocated to defense sites, and the remaining $31 million to non-defense sites. Congress provided the funding for DOE to establish this office in the Energy and Water Development Appropriations Act for FY2004 (P.L. 108-137). The primary function of the office is to assess long-term stewardship needs once cleanup is complete, to ensure that DOE's cleanup actions continue to be effective in the future. These planning assumptions are currently based on a time frame of 150 years. DOE previously administered these responsibilities under multiple elements of its Environmental Management program.

Civilian Nuclear Waste

Considerable controversy erupted over the Bush Administration's FY2005 budget request for the DOE civilian nuclear waste disposal program. Although the program's proposed budget totaled $880 million—a 50% boost over FY2004—the Administration also proposed that $749 million be

[20] See, e.g., TVA v. Hill, 437 U.S. 153 (1978); Robertson v. Seattle Audubon Society, 503 U.S. 429 (1992); AFL-CIO v. Campbell, 659 F.2d 157, 160 (D.C.Cir. Dec 18, 1980).

offset by revenue from the existing nuclear waste fee, so that the net appropriation would be only $131 million.

The House Appropriations Committee, noting that Congress had not enacted the Administration's waste-fee offset proposal, voted to provide only the $131 million net appropriation request rather than cut other programs to make up the difference. The controversy contributed to a decision by the Senate Appropriations Committee's Energy and Water Development Subcommittee against holding a markup on the FY2005 funding bill. At one point, it appeared that the Energy and Water bill would be left out of the omnibus spending bill, but a compromise was ultimately reached to give the DOE waste program $577.0 million, the same as the FY2004 funding level.

The Administration's proposed spending increase was intended primarily to pay for designing a national nuclear waste repository at Yucca Mountain, Nevada, and for developing a national waste transportation program. DOE contends that funding for the waste program, run by the Office of Civilian Radioactive Waste Management (OCRWM), must average $1.3 billion per year between FY2005 and FY2010 to meet the current 2010 target date for shipping nuclear waste to Yucca Mountain. That target date was largely dependent on DOE's plans to submit a repository license application to the Nuclear Regulatory Commission by the end of 2004—which DOE recently announced would be delayed until 2005.

In addition to the $880 million request for the civilian waste disposal program, the Administration had planned in FY2005 to transfer responsibility for DOE-owned spent fuel to a new Office of DOE Spent Fuel Management, which would report to the OCRWM Director. The $22.5 million request for the new office brought the total FY2005 request for OCRWM to $907.5 million. However, the conference report did not include the proposed transfer.

The Nuclear Waste Policy Act of 1982 (NWPA, P.L. 97-425), as amended, names Yucca Mountain as the sole candidate site for a national geologic repository. Congress passed an approval resolution in July 2000 (H.J.Res. 87, P.L. 107-200) that authorized the Yucca Mountain project to proceed to the licensing phase.

FY2005 funding in the conference report for the Office of Civilian Radioactive Waste Management comes from two appropriations accounts. First, $346.0 million is appropriated from the Nuclear Waste Fund, which consists of fees paid by nuclear utilities. Second, $231.0 million would be appropriated from general revenues under the Defense Nuclear Waste Disposal account, which pays for disposing of high-level waste from the nuclear weapons program in the planned civilian repository.

The House Appropriations Committee excoriated the Administration for requesting a net appropriation of only $131 million and for assuming that Congress would enact the waste-fee offset proposal in time. "At best, the Office of Management and Budget (OMB) made an unwise budget calculation to assume this offset," said the committee report. "At worst, OMB took a foolish political gamble by assuming that reclassification legislation would be enacted this year."

The House panel warned in its report that the funding cutback would have "far-reaching" consequences for the nuclear waste program, but that there was no funding available under the budget request to shift from other programs. The Committee report noted DOE's prediction that the funding reduction could force layoffs of 70% of the program's work force, place submittal of the repository license application "at risk," and cause "an indefinite delay in opening the repository."

On the same day the House Appropriations Committee approved the energy and water bill, the Subcommittee on Energy and Air Quality of the House Energy and Commerce Committee approved a bill (H.R. 3891) to enact the Administration's nuclear waste fee reclassification

proposal. However, the use of waste fees to offset appropriations for the repository program would be limited to the next five years. No Senate action has been taken on the proposal.

The 2010 target for opening a permanent repository is 12 years later than the Nuclear Waste Policy Act deadline of January 31, 1998, for DOE to begin taking waste from nuclear plant sites. Nuclear utilities and state utility regulators, upset over DOE's failure to meet the 1998 disposal deadline, have won two federal court decisions upholding the department's obligation to meet the deadline and to compensate utilities for any resulting damages. Utilities have also won several cases in the U.S. Court of Federal Claims. The nation's largest nuclear utility, Exelon Corporation, reached a breach-of-contract settlement with the federal government in August 2004 that may total $600 million if DOE does not begin taking spent fuel before 2015.

Further delays in the Yucca Mountain program could result from a July 2004 court decision that overturned a key aspect of the Environmental Protection Agency's (EPA's) regulations for the repository. A three-judge panel of the U.S. Court of Appeals for the District of Columbia Circuit ruled that EPA's 10,000-year compliance period was too short, but it rejected several other challenges to the standards. (For more information, see CRS Issue Brief IB92059, *Civilian Nuclear Waste Disposal*, by Mark Holt.)

Power Marketing Administrations

DOE's four Power Marketing Administrations (PMAs) developed during the 1930s out of the construction of dams and multi-purpose water projects that are operated by the Bureau of Reclamation and the Army Corps of Engineers. The original intention behind many of these projects was conservation and management of water resources, including irrigation, flood control, recreation, and other objectives. However, many of these facilities generated electricity for project needs. The PMAs were established to market the excess power; they are the Bonneville Power Administration (BPA), Southeastern Power Administration (SEPA), Southwestern Power Administration (SWPA), and Western Area Power Administration (WAPA).

The power is sold at wholesale to electric utilities and federal agencies "at the lowest possible rates ... consistent with sound business practice," and priority on PMA power is extended to "preference customers," which include municipal utilities, co-ops and other "public" bodies. The PMAs do not own the generating facilities, but they generally do own transmission facilities, except for Southeastern. The PMAs are responsible for covering their expenses and repaying debt and the federal investment in the generating facilities.

The 104th Congress debated sale of the PMAs and did, in 1995, authorize divestiture of one PMA (the Alaska Power Administration Act, P.L. 104-58). There has been no press to dispose of the remaining PMAs, and none seems likely given the broader uncertainties governing electric utility restructuring.

Congress enacted a funding level of $213.0 million in FY2004, less $22 million in Colorado River Basin revenues. The FY2005 request is $210.5, less $23 million in Colorado River revenues, reflecting a reduction of $3.8 million for WAPA, and slight increases for the three other PMAs. The House bill included the same level of funding, as does the omnibus bill (less the 0.80% rescission).

BPA receives no annual appropriation, but funds some of its activities from permanent borrowing authority, which was increased in FY2003 from $3.75 billion to $4.45 billion (a $700 million increase). BPA is not requesting additional borrowing authority in FY2005. BPA intends to use $487 million of its borrowing authority in FY2004, down from $528 in FY2004, to be used for

generation and transmission services, conservation, energy efficiency, fish and wildlife, and capital equipment programs.

Title IV: Independent Agencies

Independent agencies that receive funding from the Energy and Water Development bill include the Nuclear Regulatory Commission (NRC), the Appalachian Regional Commission (ARC), and the Denali Commission.

Table 11. Energy and Water Development Appropriations Title IV: Independent Agencies

($ millions)

Program	FY2004	FY2005 Request	House H.R. 4614	P.L. 108-447[a]
Appalachian Regional Commission	65.6	66.0	38.5	66.0
Nuclear Regulatory Commission	625.6	670.3	670.3	670.3
(Revenues)	(545.6)	(541.1)	(541.1)	(541.1)
Net NRC	80.1	129.2	129.2	129.2
Defense Nuclear Facilities Safety Board	19.4	20.3	20.3	20.3
Nuclear Waste Technical Review Board	3.2	3.2	3.2	3.2
TVA Inspector General	—	9.0	—	—
Denali Commission	54.7	2.5	—	67.0
Delta Regional Authority	5.0	2.1	2.1	6.0
Total	**227.9**	**232.3**	**193.2**	**291.7**

Source: President's budget request for FY2005, H.Rept. 108-554 and H.Rept. 108-792.

a. Does not include the modified rescission amount of .80% in H.Con.Res. 528.

Key Policy Issues—Independent Agencies

Nuclear Regulatory Commission

The Nuclear Regulatory Commission (NRC) requested a total budget of $670.3 million for FY2005, including $7.5 million for the NRC inspector general's office. The request is about 7% above the FY2004 funding level. Major activities conducted by NRC include safety regulation and licensing of commercial nuclear reactors, licensing of nuclear waste facilities, and oversight of nuclear materials users. The omnibus conference report provides the full request, as did the House-passed energy and water bill.

NRC proposed to spend $39.7 million—an 18% increase—on licensing activities for possible new commercial reactors, which are being encouraged by DOE's Nuclear Power 2010 program. According to the NRC budget justification, the funding will be used for early site permits (sites approved for future reactors), reactor pre-licensing and licensing reviews, and certification of new reactor designs.

The House Appropriations Committee had approved bill language prohibiting NRC from issuing a license during FY2005 for construction or operation of a new commercial nuclear power plant. The committee report contended: "For the Nuclear Regulatory Commission to license any new

reactors without a certain disposal path for the spent nuclear fuel would be unjustifiable and irresponsible." However, the conference report and the House-passed bill do not include the licensing restriction.

In the wake of the September 11, 2001, terrorist attacks against the United States, NRC has focused additional attention on the security of nuclear power plants and other users of radioactive material. NRC's FY2005 budget request included $56.8 million for activities related to homeland security, a 10% increase over FY2004. In FY2005, NRC intends to continue conducting force-on-force security exercises and require nuclear plants to revise their security plans to reflect increased baseline threats. (For more information on protecting licensed nuclear facilities, see CRS Report RS21131, *Nuclear Power Plants: Vulnerability to Terrorist Attack*, by Carl E. Behrens.)

To begin reviewing an anticipated DOE license application for a national nuclear waste repository at Yucca Mountain, Nevada, the NRC budget for high-level waste regulation would more than double from FY2004. The $69.1 million request also includes safety testing of full-scale casks for transporting nuclear waste by rail and by truck.

For the decade before FY2001, NRC's budget was offset 100% by fees on nuclear power plants and payments by other licensed activities, such as the DOE nuclear waste program. The nuclear power industry had long contended that the fee structure required nuclear reactor owners to pay for a number of NRC programs, such as foreign nuclear safety efforts, from which they did not directly benefit. To account for that concern, the FY2001 Energy and Water Development Appropriations Act (P.L. 106-377) included an NRC proposal to phase down the agency's fee recovery to 90% during the subsequent five years—two percentage points per year. Therefore, 90% of the FY2005 NRC budget is to be offset by fees on licensees. Because $69.1 million is to be appropriated from the Nuclear Waste Fund to pay for waste repository licensing, the 90% fee requirement applies to $601.2 million of the budget, leaving a net appropriation of $60.1 million. With the Nuclear Waste Fund appropriation, NRC's total net appropriation in the conference report is $129.2 million.

For Additional Reading

CRS Issue Briefs

CRS Issue Brief IB10041. *Renewable Energy: Tax Credit, Budget, and Electricity Production Issues,* by Fred Sissine.

CRS Issue Brief IB92059. *Civilian Nuclear Waste Disposal,* by Mark Holt.

CRS Issue Brief IB10091. *Nuclear Nonproliferation Issues,* by Carl Behrens.

CRS Issue Brief IB10120. *Army Corps of Engineers Civil Works Program: Issues for Congress,* by Nicole T. Carter and Pervaze A. Sheikh.

CRS Issue Brief IB88090. *Nuclear Energy Policy*, by Mark Holt and Carl Behrens.

CRS Reports

CRS Report RS20702. *South Florida Ecosystem Restoration and the Comprehensive Everglades Restoration Plan,* by Nicole T. Carter and Pervaze A. Sheikh.

CRS Report RL30928. *Army Corps of Engineers: Reform Issues for the 107th Congress,* by Nicole T. Carter.

CRS Report RS20569. *Water Resource Issues in the 107th Congress,* by Betsy A. Cody and H. Steven Hughes.

CRS Report RS20866. *The Civil Works Program of the Army Corps of Engineers: A Primer,* by Nicole T. Carter and Betsy A. Cody.

CRS Report RL31116. *Water Infrastructure Funding: Review and Analysis of Current Issues,* by Claudia Copeland and Mary Tiemann.

CRS Report RL30478. *Federally Supported Water Supply and Wastewater Treatment Programs,* by the Resources, Science and Industry Division.

CRS Report RL32189. *Terrorism and Security Issues Facing the Water Infrastructure Sector,* by Claudia Copeland and Betsy A. Cody.

CRS Report RL31098. *Klamath River Basin Issues: An Overview of Water Use Conflicts,* coordinated by Betsy A. Cody.

CRS Report RL30928. *Army Corps of Engineers: Reform Issues for the 107th Congress*, by Nicole T. Carter.

CRS Report RL32131, *Phosphorus Mitigation in the Everglades*, by Pervaze A. Sheikh and Barbara Johnson.

CRS Report RL31975, *CALFED Bay-Delta Program: Overview of Institutional and Water Use Issues*, by Betsy A. Cody and Pervaze Sheikh.

CRS Report RL32130, *Nuclear Weapon Initiatives: Low-Yield R&D, Advanced Concepts, Earth Penetrators, Test Readiness,* by Jonathan Medalia.

CRS Report RL32347, *Robust Nuclear Earth Penetrator Budget Request and Plan, FY2005-FY2009,* by Jonathan Medalia.

CRS Report RL31993, *Nuclear Warhead 'Pit' Production: Background and Issues for Congress,* by Jonathan Medalia.

CRS Report RL32163, *Radioactive Waste Streams: An Overview of Waste Classification for Disposal*, by Anthony Andrews.

CRS Report RS21131, *Nuclear Power Plants: Vulnerability to Terrorist Attack*, by Carl E. Behrens.

Order Code RL32307

The annual consideration of appropriations bills (regular, continuing, and supplemental) by Congress is part of a complex set of budget processes that also encompasses the consideration of budget resolutions, revenue and debt-limit legislation, other spending measures, and reconciliation bills. In addition, the operation of programs and the spending of appropriated funds are subject to constraints established in authorizing statutes. Congressional action on the budget for a fiscal year usually begins following the submission of the President's budget at the beginning of the session. Congressional practices governing the consideration of appropriations and other budgetary measures are rooted in the Constitution, the standing rules of the House and Senate, and statutes, such as the Congressional Budget and Impoundment Control Act of 1974.

This report is a guide to one of the 13 regular appropriations bills that Congress considers each year. It is designed to supplement the information provided by the House and Senate

Appropriations Subcommittees on Energy and Water Development. It summarizes the status of the bill, its scope, major issues, funding levels, and related congressional activity, and is updated as events warrant. The report lists the key CRS staff relevant to the issues covered and related CRS products.

NOTE: A Web version of this document with active links is available to congressional staff at http://www.crs.gov/products/appropriations/apppage.shtml.

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Division abbreviations: RSI = Resources, Science, and Industry; FDT= Foreign Affairs, Defense, and Trade.

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